



CONTAINS NO CRI GE Appliances

Decatur Plant Operations  
General Electric Company  
2328 8th Street, S.E., PO Box 2223  
Decatur, AL 35609-2223  
205 552-1305

June 5, 1989

Document Processing Center  
Office of Toxic Substances, TS-790  
U.S. Environmental Protection Agency  
401 M Street, S.W.  
Washington, D.C. 20460

90-890000403

Attention: CAIR Reporting Office

Gentlemen,

Find enclosed completed CAIR Reporting Form submitted as required under 40 CFR part 704 subpart D, for GE Decatur Alabama Plant Operations. If there questions concerning the data herein, please contact the undersigned at either 205-552-1354 or 205-552-1305.

Sincerely,

Paul E. Saywell, Jr.  
Manager, Environmental, Safety & Health

cc: G.D. Caplinger

Mary Alice Brunner  
AP 26-101

63 JUL 10 PM 2:44  
U.S. DEPARTMENT OF JUSTICE  
OFFICE



Form Approved  
OMB No. 2010-0019  
Approval Expires 12-31-89

EPA-OTS



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90-890000 403

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Comprehensive Assessment Information Rule  
REPORTING FORM

When completed, send this form to:

Document Processing Center  
Office of Toxic Substances, TS-790  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, DC 20460  
Attention: CAIR Reporting Office

For Agency Use Only:

Date of Receipt: \_\_\_\_\_

Document  
Control Number: \_\_\_\_\_

Docket Number: \_\_\_\_\_

SECTION 1 GENERAL MANUFACTURER, IMPORTER, AND PROCESSOR INFORMATION

PART A GENERAL REPORTING INFORMATION

1.01 This Comprehensive Assessment Information Rule (CAIR) Reporting Form has been

completed in response to the Federal Register Notice of..... [1][2] [2][2] [8][8]  
CBI mo. day year

☐ a. If a Chemical Abstracts Service Number (CAS No.) is provided in the Federal Register, list the CAS No. .... [0][2][6][4][7][1]-[6][2]-[5]

b. If a chemical substance CAS No. is not provided in the Federal Register, list either (i) the chemical name, (ii) the mixture name, or (iii) the trade name of the chemical substance as provided in the Federal Register.

(i) Chemical name as listed in the rule ..... N/A

(ii) Name of mixture as listed in the rule .... N/A

(iii) Trade name as listed in the rule ..... N/A

c. If a chemical category is provided in the Federal Register, report the name of the category as listed in the rule, the chemical substance CAS No. you are reporting on which falls under the listed category, and the chemical name of the substance you are reporting on which falls under the listed category.

Name of category as listed in the rule ..... N/A

CAS No. of chemical substance ..... [N/A][ ][ ][ ]-[ ][ ]-[ ]

Name of chemical substance ..... N/A

1.02 Identify your reporting status under CAIR by circling the appropriate response(s).

CBI Manufacturer ..... 1

☐ Importer ..... 2

Processor ..... ③

X/P manufacturer reporting for customer who is a processor ..... 4

X/P processor reporting for customer who is a processor ..... 5

☐ Mark (X) this box if you attach a continuation sheet.

1.03 Does the substance you are reporting on have an "x/p" designation associated with it in the above-listed Federal Register Notice?

CBI  
☐ Yes ..... [☒] Go to question 1.04  
☐ No ..... [☐] Go to question 1.05

1.04 a. Do you manufacture, import, or process the listed substance and distribute it under a trade name(s) different than that listed in the Federal Register Notice? Circle the appropriate response.

CBI  
☐ Yes ..... 1  
☐ No ..... (2)

b. Check the appropriate box below: N/A

☐ You have chosen to notify your customers of their reporting obligations

Provide the trade name(s) ....

☐ You have chosen to report for your customers

☐ You have submitted the trade name(s) to EPA one day after the effective date of the rule in the Federal Register Notice under which you are reporting.

1.05 If you buy a trade name product and are reporting because you were notified of your reporting requirements by your trade name supplier, provide that trade name.

CBI  
Trade name .....

☐ Is the trade name product a mixture? Circle the appropriate response.

Yes ..... 1

No ..... (2)

1.06 Certification -- The person who is responsible for the completion of this form must sign the certification statement below:

CBI  
☐ "I hereby certify that, to the best of my knowledge and belief, all information entered on this form is complete and accurate."

<u>G. D. CAPLINGER</u> NAME	<u>G. D. Caplinger</u> SIGNATURE	<u>2/6/89</u> DATE SIGNED
<u>PLANT MANAGER</u> TITLE	<u>(205) 552 - 1200</u> TELEPHONE NO.	

☐ Mark (X) this box if you attach a continuation sheet.

1.07 Exemptions From Reporting -- If you have provided EPA or another Federal agency with the required information on a CAIR Reporting Form for the listed substance within the past 3 years, and this information is current, accurate, and complete for the time period specified in the rule, then sign the certification below. You are required to complete section 1 of this CAIR form and provide any information now required but not previously submitted. Provide a copy of any previous submissions along with your Section 1 submission.

CBI

☐

"I hereby certify that, to the best of my knowledge and belief, all required information which I have not included in this CAIR Reporting Form has been submitted to EPA within the past 3 years and is current, accurate, and complete for the time period specified in the rule."

_____ NAME	_____ SIGNATURE	_____ DATE SIGNED
_____ TITLE	(_____) _____ TELEPHONE NO.	_____ DATE OF PREVIOUS SUBMISSION

1.08 CBI Certification -- If you have asserted any CBI claims in this report you must certify that the following statements truthfully and accurately apply to all of those confidentiality claims which you have asserted.

CBI

☐

"My company has taken measures to protect the confidentiality of the information, and it will continue to take these measures; the information is not, and has not been, reasonably ascertainable by other persons (other than government bodies) by using legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding) without my company's consent; the information is not publicly available elsewhere; and disclosure of the information would cause substantial harm to my company's competitive position."

_____ NAME	_____ SIGNATURE	_____ DATE SIGNED
_____ TITLE	(_____) _____ TELEPHONE NO.	

☐ Mark (X) this box if you attach a continuation sheet.

## 1.09 Facility Identification

### 1.10 Company Headquarters Identification

☐ Mark (X) this box if you attach a continuation sheet.

### 1.11 Parent Company Identification

CBI Name [G][E] [ ]

[ ] Address [3] [1] [3] [5] [ ] E A S T O N [ ] T U R N P I K E [ ] [ ] [ ]  
Street

[F][A][I][R][F][I][E][L][D][ ]  
City

State Zip

Dun &amp; Bradstreet Number .....[0][0]-[1][3][6]-[7][9][6][0]

### 1.12 Technical Contact

CBI Name [P][A][H][L][ ][E][ ][S][A][Y][W][E][L][L][ ][J][A][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

[ ] Title [MGR]-MED-ENV-SAFETY-HEALTH [ ]

Address [2][3][2][8] [8]+[H] [S][T] [S][E] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]  
Street

[D][E][C][A][T][U][R] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]  
City

AL      35669--2223  
State                      Zip

Telephone Number .....[2][0][5]-[5][5][2]-[1][3][5][4]

1.13 This reporting year is from ..... [01] [88] to [12] [88]  
Mo. Year Mo. Year

☐ Mark (X) this box if you attach a continuation sheet.

N/A

[illegible]

City

[ ][ ]      [ ][ ][ ][ ]--[ ][ ][ ][ ]  
State                  Zip

Employer ID Number .....( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )

Date of Sale ..... [ ] [ ] [ ] [ ] [ ] [ ]  
Mo. Day Year

[illegible]

Telephone Number .....( ) ( ) ( ) - ( ) ( ) ( ) - ( ) ( ) ( ) ( )

N/A

[illegible]

Street

\_\_\_\_\_  
City

--  
State                  Zip

Employer ID Number .....[ ][ ][ ][ ][ ][ ][ ][ ]

Date of Purchase ..... [ ] [ ]    [ ] [ ]    [ ] [ ]  
Mo. Day Year

[illegible]

Telephone Number .....[ ][ ]-[ ][ ]-[ ][ ]

[ ]



1.16 For each classification listed below, state the quantity of the listed substance that was manufactured, imported, or processed at your facility during the reporting year.

CBI

<u>Classification</u>	<u>Quantity (kg/yr)</u>
Manufactured .....	<u>N/A</u>
Imported .....	<u>N/A</u>
Processed (include quantity repackaged) .....	<u>672,009</u>
Of that quantity manufactured or imported, report that quantity:	
In storage at the beginning of the reporting year .....	<u>N/A</u>
For on-site use or processing .....	<u>N/A</u>
For direct commercial distribution (including export) .....	<u>N/A</u>
In storage at the end of the reporting year .....	<u>N/A</u>
Of that quantity processed, report that quantity:	
In storage at the beginning of the reporting year .....	<u>28,223</u>
Processed as a reactant (chemical producer) .....	<u>N/A</u>
Processed as a formulation component (mixture producer) .....	<u>N/A</u>
Processed as an article component (article producer) .....	<u>672,009</u>
Repackaged (including export) .....	<u>N/A</u>
In storage at the end of the reporting year .....	<u>- 0 -</u>

☐ Mark (X) this box if you attach a continuation sheet.

PART C IDENTIFICATION OF MIXTURES

1.17 Mixture -- If the listed substance on which you are required to report is a mixture or a component of a mixture, provide the following information for each component chemical. (If the mixture composition is variable, report an average percentage of each component chemical for all formulations.)

CBI

☐

N/A

Component Name	Supplier Name	Average % Composition by Weight (specify precision, e.g., 45% $\pm$ 0.5%)
		Total 100%

☐ Mark (X) this box if you attach a continuation sheet.

2.04 State the quantity of the listed substance that your facility manufactured, imported, or processed during the 3 corporate fiscal years preceding the reporting year in descending order.

CBI

☐ Year ending ..... [1][2] [8][7]  
Mo. Year

Quantity manufactured ..... N/A kg

Quantity imported ..... N/A kg

Quantity processed ..... 715,336 kg

Year ending ..... [1][2] [8][6]  
Mo. Year

Quantity manufactured ..... N/A kg

Quantity imported ..... N/A kg

Quantity processed ..... 800,1645 kg

Year ending ..... [1][2] [8][5]  
Mo. Year

Quantity manufactured ..... N/A kg

Quantity imported ..... N/A kg

Quantity processed ..... NOT AVAILABLE kg

2.05 Specify the manner in which you manufactured the listed substance. Circle all appropriate process types.

CBI

☐ Continuous process ..... 1

Semicontinuous process ..... (2)

Batch process ..... 3

☐ Mark (X) this box if you attach a continuation sheet.

2.06 Specify the manner in which you processed the listed substance. Circle all appropriate process types.

☐ Continuous process ..... 1  
☐ Semicontinuous process ..... (2)  
☐ Batch process ..... 3

2.07 State your facility's name-plate capacity for manufacturing or processing the listed substance. (If you are a batch manufacturer or batch processor, do not answer this question.)

☐ Manufacturing capacity ..... N/A kg/yr  
☐ Processing capacity ..... 2,227,272 kg/yr

2.08 If you intend to increase or decrease the quantity of the listed substance manufactured, imported, or processed at any time after your current corporate fiscal year, estimate the increase or decrease based upon the reporting year's production volume.

	Manufacturing Quantity (kg)	Importing Quantity (kg)	Processing Quantity (kg)
Amount of increase	<u>N/A</u>	<u>N/A</u>	<u>3,009,090 *</u>
Amount of decrease	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

\* MAXIMUM PROCESSING CAPACITY  
OF INCREASE. FIRST FULL YR  
OF INCREASE - 1990.

☐ Mark (X) this box if you attach a continuation sheet.

2.09 For the three largest volume manufacturing or processing process types involving the listed substance, specify the number of days you manufactured or processed the listed substance during the reporting year. Also specify the average number of hours per day each process type was operated. (If only one or two operations are involved, list those.)

CBI

☐

Days/Year      Average  
Hours/Day

Process Type #1 (The process type involving the largest quantity of the listed substance.)

Manufactured .....	<u>N/A</u>	<u>N/A</u>
Processed .....	<u>191</u>	<u>16</u>

Process Type #2 (The process type involving the 2nd largest quantity of the listed substance.)

Manufactured .....	<u>N/A</u>	<u>N/A</u>
Processed .....	<u>N/A</u>	<u>N/A</u>

Process Type #3 (The process type involving the 3rd largest quantity of the listed substance.)

Manufactured .....	<u>N/A</u>	<u>N/A</u>
Processed .....	<u>NA</u>	<u>NA</u>

2.10 State the maximum daily inventory and average monthly inventory of the listed substance that was stored on-site during the reporting year in the form of a bulk chemical.

CBI

☐

Maximum daily inventory .....	_____	kg
Average monthly inventory .....	_____	kg

☐ Mark (X) this box if you attach a continuation sheet.

2.11 Related Product Types -- List any byproducts, coproducts, or impurities present with the listed substance in concentrations greater than 0.1 percent as it is manufactured, imported, or processed. The source of byproducts, coproducts, or impurities means the source from which the byproducts, coproducts, or impurities are made or introduced into the product (e.g., carryover from raw material, reaction product, etc.).

CBI

☐

UNKNOWN

<u>CAS No.</u>	<u>Chemical Name</u>	<u>Byproduct, Coproduct or Impurity<sup>1</sup></u>	<u>Concentration (%) (specify <math>\pm</math> % precision)</u>	<u>Source of Byproducts, Coproducts, or Impurities</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

<sup>1</sup>Use the following codes to designate byproduct, coproduct, or impurity:

B = Byproduct  
C = Coproduct  
I = Impurity

☐ Mark (X) this box if you attach a continuation sheet.

2.12 Existing Product Types -- List all existing product types which you manufactured, imported, or processed using the listed substance during the reporting year. List the quantity of listed substance you use for each product type as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

☐

a.	b.	c.	d.
Product Types <sup>1</sup>	% of Quantity Manufactured, Imported, or Processed	% of Quantity Used Captively On-Site	Type of End-Users <sup>2</sup>
B	100%	100%	N/A

<sup>1</sup>Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/ Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

<sup>2</sup>Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

- 2.13 Expected Product Types -- Identify all product types which you expect to manufacture, import, or process using the listed substance at any time after your current corporate fiscal year. For each use, specify the quantity you expect to manufacture, import, or process for each use as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

☐

a.	b.	c.	d.
Product Types <sup>1</sup>	% of Quantity Manufactured, Imported, or Processed	% of Quantity Used Captively On-Site	Type of End-Users <sup>2</sup>
B	100	100	N/A

<sup>1</sup>Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/ Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/ Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

<sup>2</sup>Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.



2.14 Final Product -- Complete the following table for each type of final product manufactured, imported, or processed at your facility that contains the listed substance other than as an impurity.

☐

a.	b.	c.	d.
Product Type <sup>1</sup>	Final Product's Physical Form <sup>2</sup>	Average % Composition of Listed Substance in Final Product	Type of End-Users <sup>3</sup>
N/A	N/A	N/A	N/A

<sup>1</sup>Use the following codes to designate product types:

A = Solvent	L = Moldable/Castable/Rubber and additives
B = Synthetic reactant	M = Plasticizer
C = Catalyst/Initiator/Accelerator/Sensitizer	N = Dye/Pigment/Colorant/Ink and additives
D = Inhibitor/Stabilizer/Scavenger/Antioxidant	O = Photographic/Reprographic chemical and additives
E = Analytical reagent	P = Electrodeposition/Plating chemicals
F = Chelator/Coagulant/Sequestrant	Q = Fuel and fuel additives
G = Cleanser/Detergent/Degreaser	R = Explosive chemicals and additives
H = Lubricant/Friction modifier/Antiwear agent	S = Fragrance/Flavor chemicals
I = Surfactant/Emulsifier	T = Pollution control chemicals
J = Flame retardant	U = Functional fluids and additives
K = Coating/Binder/Adhesive and additives	V = Metal alloy and additives
	W = Rheological modifier
	X = Other (specify) _____

<sup>2</sup>Use the following codes to designate the final product's physical form:

A = Gas	F2 = Crystalline solid
B = Liquid	F3 = Granules
C = Aqueous solution	F4 = Other solid
D = Paste	G = Gel
E = Slurry	H = Other (specify) _____
F1 = Powder	

<sup>3</sup>Use the following codes to designate the type of end-users:

I = Industrial	CS = Consumer
CM = Commercial	H = Other (specify) _____

☐ Mark (X) this box if you attach a continuation sheet.

2.15 Circle all applicable modes of transportation used to deliver bulk shipments of the  
CBI listed substance to off-site customers.

- ☐ Truck ..... N/A ..... 1  
Railcar ..... 2  
Barge, Vessel ..... 3  
Pipeline ..... 4  
Plane ..... 5  
Other (specify) \_\_\_\_\_ 6

2.16 Customer Use -- Estimate the quantity of the listed substance used by your customers  
CBI or prepared by your customers during the reporting year for use under each category  
of end use listed (i-iv).

- ☐ Category of End Use N/A
- i. Industrial Products
- Chemical or mixture ..... kg/yr  
Article ..... kg/yr
- ii. Commercial Products
- Chemical or mixture ..... kg/yr  
Article ..... kg/yr
- iii. Consumer Products
- Chemical or mixture ..... kg/yr  
Article ..... kg/yr
- iv. Other
- Distribution (excluding export) ..... kg/yr  
Export ..... kg/yr  
Quantity of substance consumed as reactant ..... kg/yr  
Unknown customer uses ..... kg/yr

☐ Mark (X) this box if you attach a continuation sheet.

**SECTION 3 PROCESSOR RAW MATERIAL IDENTIFICATION**

**PART A GENERAL DATA**

- 3.01 Specify the quantity purchased and the average price paid for the listed substance for each major source of supply listed. Product trades are treated as purchases.  
**CBI** The average price is the market value of the product that was traded for the listed substance.

☐

<u>Source of Supply</u>	<u>Quantity (kg)</u>	<u>Average Price (\$/kg)</u>
The listed substance was manufactured on-site.	N/A	N/A
The listed substance was transferred from a different company site.	N/A	N/A
The listed substance was purchased directly from a manufacturer or importer.	672,009	\$ 2.68
The listed substance was purchased from a distributor or repackager.	N/A	N/A
The listed substance was purchased from a mixture producer.	N/A	N/A

- 3.02 Circle all applicable modes of transportation used to deliver the listed substance to your facility.

☐

- Truck ..... ①  
 Railcar ..... 2  
 Barge, Vessel ..... 3  
 Pipeline ..... 4  
 Plane ..... 5  
 Other (specify) \_\_\_\_\_ 6

☐ Mark (X) this box if you attach a continuation sheet.

3.03 a. Circle all applicable containers used to transport the listed substance to your facility.  
CBI

☐

Bags ..... 1  
Boxes ..... 2  
Free standing tank cylinders ..... 3  
Tank rail cars ..... 4  
Hopper cars ..... 5  
Tank trucks ..... 6  
Hopper trucks ..... 7  
Drums ..... 8  
Pipeline ..... 9  
Other (specify) ..... 10

b. If the listed substance is transported in pressurized tank cylinders, tank rail cars, or tank trucks, state the pressure of the tanks.

Tank cylinders ..... N/A mmHg  
Tank rail cars ..... N/A mmHg  
Tank trucks ..... N/A mmHg

☐ Mark (X) this box if you attach a continuation sheet.

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PART B RAW MATERIAL IN THE FORM OF A MIXTURE

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3.04 If you obtain the listed substance in the form of a mixture, list the trade name(s) of the mixture, the name of its supplier(s) or manufacturer(s), an estimate of the average percent composition by weight of the listed substance in the mixture, and the amount of mixture processed during the reporting year.

CBI

☐

N/A

<u>Trade Name</u>	<u>Supplier or Manufacturer</u>	<u>Average % Composition by Weight (specify <math>\pm</math> % precision)</u>	<u>Amount Processed (kg/yr)</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

---

☐ Mark (X) this box if you attach a continuation sheet.

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PART C RAW MATERIAL VOLUME

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3.05 State the quantity of the listed substance used as a raw material during the reporting year in the form of a class I chemical, class II chemical, or polymer, and the percent composition, by weight, of the listed substance.

CBI

☐

	Quantity Used (kg/yr)	% Composition by Weight of Listed Sub- stance in Raw Material (specify $\pm$ % precision)
Class I chemical	<u>672,009</u>	<u>60%</u> <u>(precision unknown)</u>
Class II chemical	<u>N/A</u>	<u>N/A</u>
Polymer	<u>N/A</u>	<u>N/A</u>

---

☐ Mark (X) this box if you attach a continuation sheet.

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## SECTION 4 PHYSICAL/CHEMICAL PROPERTIES

### General Instructions:

If you are reporting on a mixture as defined in the glossary, reply to questions in Section 4 that are inappropriate to mixtures by stating "NA -- mixture."

For questions 4.06-4.15, if you possess any hazard warning statement, label, MSDS, or other notice that addresses the information requested, you may submit a copy or reasonable facsimile in lieu of answering those questions which it addresses.

### PART A PHYSICAL/CHEMICAL DATA SUMMARY

- 4.01 Specify the percent purity for the three major<sup>1</sup> technical grade(s) of the listed substance as it is manufactured, imported, or processed. Measure the purity of the substance in the final product form for manufacturing activities, at the time you import the substance, or at the point you begin to process the substance.

CBI

☐

	<u>Manufacture</u>	<u>Import</u>	<u>Process</u>
Technical grade #1	<u>N/A</u> % purity	<u>N/A</u> % purity	<u>CRUDE UNDISTILLED</u> % purity
Technical grade #2	<u>N/A</u> % purity	<u>N/A</u> % purity	<u>N/A</u> % purity
Technical grade #3	<u>N/A</u> % purity	<u>N/A</u> % purity	<u>N/A</u> % purity

<sup>1</sup>Major = Greatest quantity of listed substance manufactured, imported or processed.

- 4.02 Submit your most recently updated Material Safety Data Sheet (MSDS) for the listed substance, and for every formulation containing the listed substance. If you possess an MSDS that you developed and an MSDS developed by a different source, submit your version. Indicate whether at least one MSDS has been submitted by circling the appropriate response.

Yes ..... (1)

No ..... 2

Indicate whether the MSDS was developed by your company or by a different source.

Your company ..... 1

Another source ..... (2)

☐

Mark (X) this box if you attach a continuation sheet.

4.03 Submit a copy or reasonable facsimile of any hazard information (other than an MSDS) that is provided to your customers/users regarding the listed substance or any formulation containing the listed substance. Indicate whether this information has been submitted by circling the appropriate response.

Yes ..... 1

No ..... (2)

4.04 For each activity that uses the listed substance, circle all the applicable number(s) corresponding to each physical state of the listed substance during the activity listed. Physical states for importing and processing activities are determined at the time you import or begin to process the listed substance. Physical states for manufacturing, storage, disposal and transport activities are determined using the final state of the product.

CBI

[ ]

Activity	Physical State				
	Solid	Slurry	Liquid	Liquified Gas	Gas
Manufacture N/A	1	2	3	4	5
Import N/A	1	2	3	4	5
Process	1	2	(3)	4	5
Store	1	2	(3)	4	5
Dispose	(1)	2	(3)	4	5
Transport N/A	1	2	3	4	5

[ ] Mark (X) this box if you attach a continuation sheet.



4.05 Particle Size -- If the listed substance exists in particulate form during any of the following activities, indicate for each applicable physical state the size and the percentage distribution of the listed substance by activity. Do not include particles  $\geq 10$  microns in diameter. Measure the physical state and particle sizes for importing and processing activities at the time you import or begin to process the listed substance. Measure the physical state and particle sizes for manufacturing storage, disposal and transport activities using the final state of the product.

CBI

☐

Physical State

N/A

Manufacture

Import

Process

Store

Dispose

Transport

Dust

<1 micron

1 to <5 microns

5 to <10 microns

Powder

<1 micron

1 to <5 microns

5 to <10 microns

Fiber

<1 micron

1 to <5 microns

5 to <10 microns

Aerosol

<1 micron

1 to <5 microns

5 to <10 microns

☐ Mark (X) this box if you attach a continuation sheet.

---

SECTION 5 ENVIRONMENTAL FATE

---

PART A RATE CONSTANTS AND TRANSFORMATION PRODUCTS

---

5.01 Indicate the rate constants for the following transformation processes.

a. Photolysis:

UNKNOWN

Absorption spectrum coefficient (peak) .... (1/M cm) at \_\_\_\_\_ nm

Reaction quantum yield,  $\phi$  ..... at \_\_\_\_\_ nm

Direct photolysis rate constant,  $k_p$ , at ... 1/hr \_\_\_\_\_ latitude

b. Oxidation constants at 25°C:

UNKNOWN

For  $^1O_2$  (singlet oxygen),  $k_{ox}$  ..... 1/M hr

For  $RO_2$  (peroxy radical),  $k_{ox}$  ..... 1/M hr

c. Five-day biochemical oxygen demand,  $BOD_5$  ... UNKNOWN mg/l

d. Biotransformation rate constant:

UNKNOWN

For bacterial transformation in water,  $k_b$  ... 1/hr

Specify culture .....

e. Hydrolysis rate constants:

UNKNOWN

For base-promoted process,  $k_B$  ..... 1/M hr

For acid-promoted process,  $k_A$  ..... 1/M hr

For neutral process,  $k_N$  ..... 1/hr

f. Chemical reduction rate (specify conditions) UNKNOWN

g. Other (such as spontaneous degradation) ...

---

☐ Mark (X) this box if you attach a continuation sheet.

---

PART B PARTITION COEFFICIENTS

5.02 a. Specify the half-life of the listed substance in the following media.

<u>Media</u>	<u>Half-life (specify units)</u>
Groundwater	UNKNOWN
Atmosphere	UNKNOWN
Surface water	UNKNOWN
Soil	UNKNOWN

b. Identify the listed substance's known transformation products that have a half-life greater than 24 hours.

<u>CAS No.</u>	<u>UNKNOWN</u> <u>Name</u>	<u>Half-life</u> <u>(specify units)</u>	<u>Media</u>
			in
			in
			in
			in

5.03 Specify the octanol-water partition coefficient,  $K_{ow}$  ... UNKNOWN at 25°C  
Method of calculation or determination .....

5.04 Specify the soil-water partition coefficient,  $K_d$  ..... UNKNOWN at 25°C  
Soil type .....

5.05 Specify the organic carbon-water partition coefficient,  $K_{oc}$  ..... UNKNOWN at 25°C

5.06 Specify the Henry's Law Constant,  $H$  ..... UNKNOWN atm-m<sup>3</sup>/mole

☐ Mark (X) this box if you attach a continuation sheet.

5.07 List the bioconcentration factor (BCF) of the listed substance, the species for which it was determined, and the type of test used in deriving the BCF.

<u>Bioconcentration Factor</u>	<u>Species</u>	<u>Test</u> <sup>1</sup>
UNKNOWN		

<sup>1</sup>Use the following codes to designate the type of test:

F = Flowthrough  
S = Static

☐ Mark (X) this box if you attach a continuation sheet.

6.04 For each market listed below, state the quantity sold and the total sales value of the listed substance sold or transferred in bulk during the reporting year.

☐

<u>Market</u>	<u>Quantity Sold or Transferred (kg/yr)</u>	<u>Total Sales Value (\$/yr)</u>
Retail sales	_____	_____
Distribution -- Wholesalers	_____	_____
Distribution -- Retailers	_____	_____
Intra-company transfer	_____	_____
Repackagers	_____	_____
Mixture producers	_____	_____
Article producers	_____	_____
Other chemical manufacturers or processors	_____	_____
Exporters	_____	_____
Other (specify)	_____	_____
_____	_____	_____

6.05 Substitutes -- List all known commercially feasible substitutes that you know exist for the listed substance and state the cost of each substitute. A commercially feasible substitute is one which is economically and technologically feasible to use in your current operation, and which results in a final product with comparable performance in its end uses.

CBI

☐

COMMERCIAL FEASIBILITY OF SUBSTITUTES UNKNOWN

Substitute

Cost (\$/kg)

_____	_____
_____	_____
_____	_____

☐ Mark (X) this box if you attach a continuation sheet.

---

SECTION 7 MANUFACTURING AND PROCESSING INFORMATION

---

General Instructions:

For questions 7.04-7.06, provide a separate response for each process block flow diagram provided in questions 7.01, 7.02, and 7.03. Identify the process type from which the information is extracted.

---

PART A MANUFACTURING AND PROCESSING PROCESS TYPE DESCRIPTION

---

7.01 In accordance with the instructions, provide a process block flow diagram showing the major (greatest volume) process type involving the listed substance.

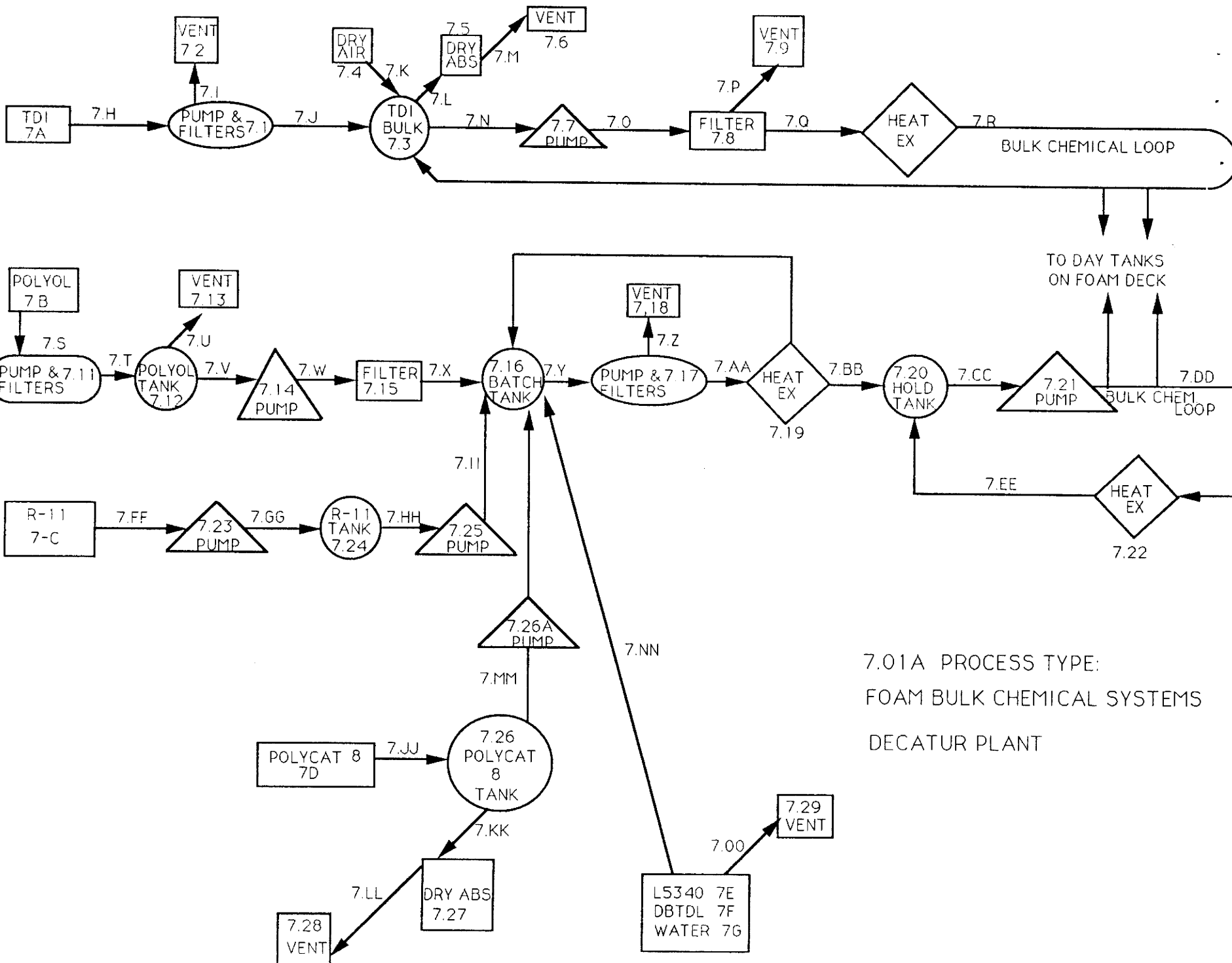
CBI

☐ Process type ..... SEE ATTACHED FLOW CHARTS (7.01A  
- FOAM BULK CHEMICAL SYSTEMS -  
PAGE 42A)  
  
AND 7.01B  
- CASE/DOOR FOAM SYSTEM  
PAGE 42B

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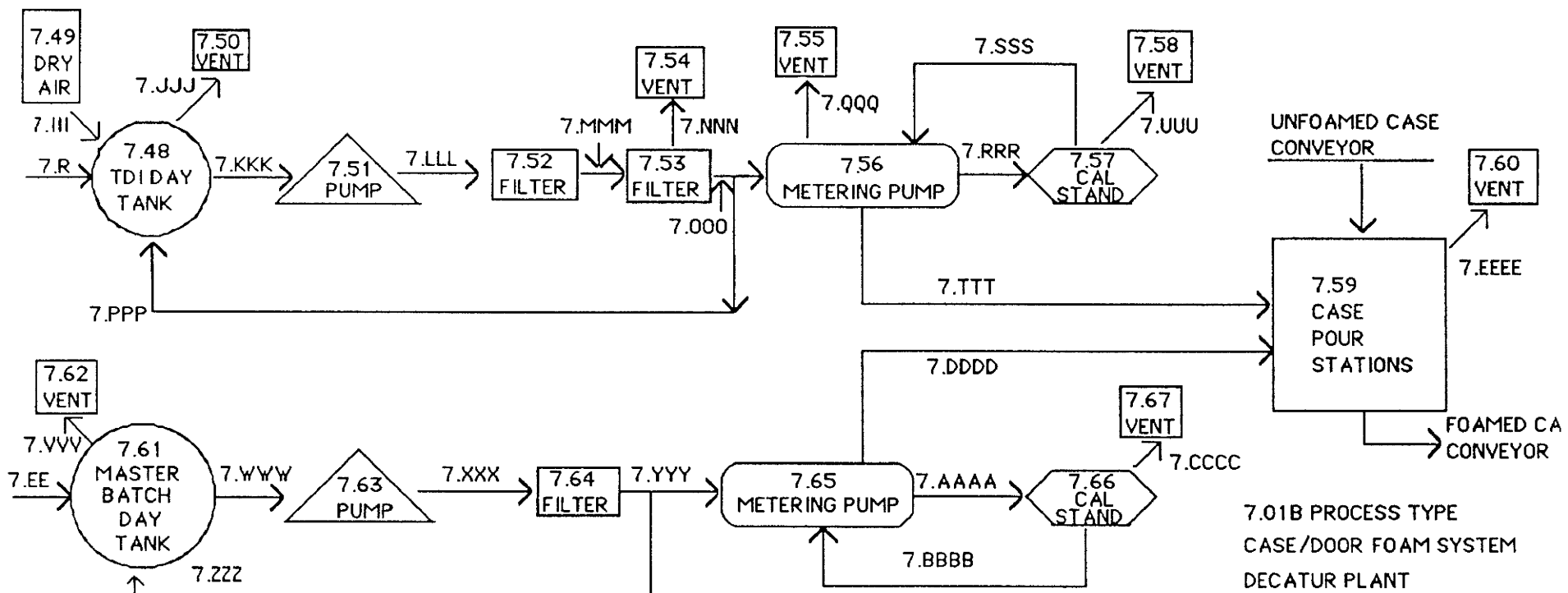
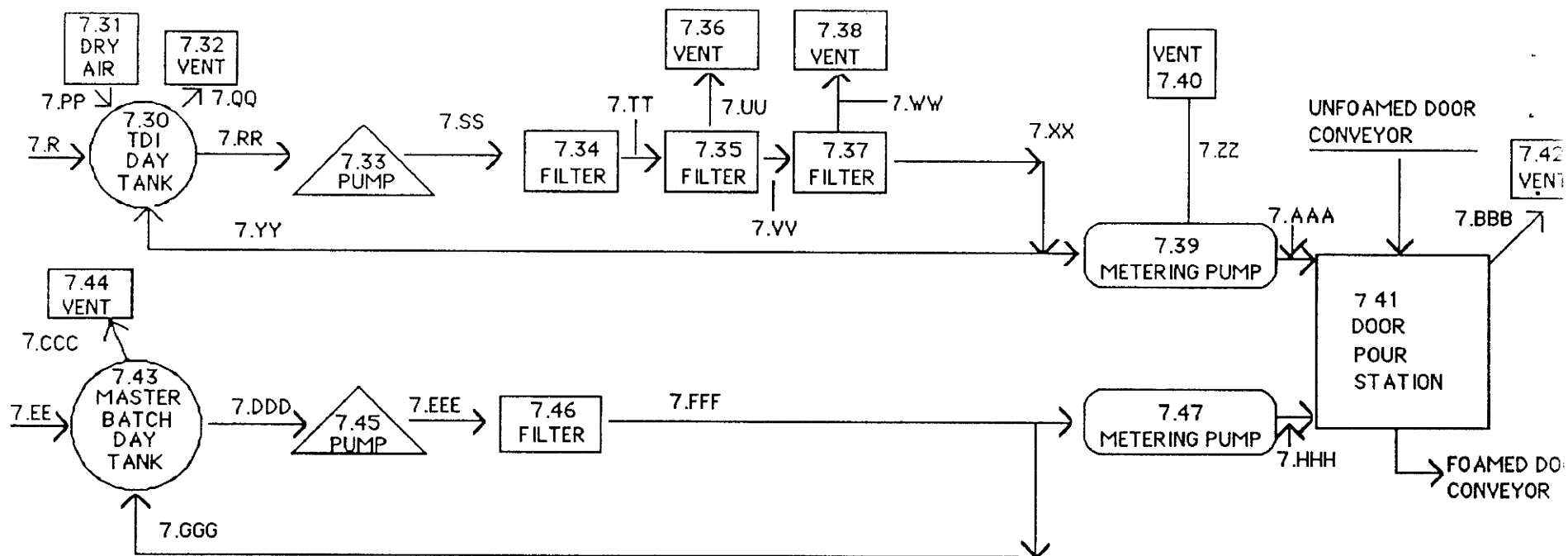
☒ Mark (X) this box if you attach a continuation sheet.

---



7.01A PROCESS TYPE:  
FOAM BULK CHEMICAL SYSTEMS  
DECATUR PLANT

41B



7.01B PROCESS TYPE  
CASE/DOOR FOAM SYSTEM  
DECATUR PLANT



7.03 In accordance with the instructions, provide a process block flow diagram showing all process emission streams and emission points that contain the listed substance and which, if combined, would total at least 90 percent of all facility emissions if not treated before emission into the environment. If all such emissions are released from one process type, provide a process block flow diagram using the instructions for question 7.01. If all such emissions are released from more than one process type, provide a process block flow diagram showing each process type as a separate block.

CBI

☐ Process type ..... 7.04A FOAM BULK CHEMICAL SYSTEMS

PLEASE REFER TO PAGE 42A FOR FLOW ID

TDI EMISSIONS

7.2 FILTER VENT (ALSO VENTS PUMP STAND)

7.6 DRY ABSORBER VENT

7.9 FILTER VENT

☒ Mark (X) this box if you attach a continuation sheet.

7.03 In accordance with the instructions, provide a process block flow diagram showing all process emission streams and emission points that contain the listed substance and which, if combined, would total at least 90 percent of all facility emissions if not treated before emission into the environment. If all such emissions are released from one process type, provide a process block flow diagram using the instructions for question 7.01. If all such emissions are released from more than one process type, provide a process block flow diagram showing each process type as a separate block.

CBI

☐ Process type ..... 701 B CASE/DOOR FOAM SYSTEM

PLEASE REFER TO PAGE 42B FOR FLOW ID

TDI EMISSIONS.

7.32 TDI DAY TANK VENT (DOOR)

7.36 FILTER VENT (TDI)

7.38 TDI FILTER VENT

7.40 TDI METERING PUMP STAND VENT

7.42 DOOR FOAM SYSTEM VENT

7.50 TDI DAY TANK VENT (CASE LINE)

7.54 TDI FILTER VENT

7.55 TDI METERING PUMP STAND VENT

7.58 TDI CALIBRATION STAND VENT

7.60 TDI CASE FOAM SYSTEM VENTS (4)

NOTE: NOT SHOWN IS AN EMERGENCY  
VENT FOR WORKER PROTECTION - LOCATED  
NEAR 7.48 AND 7.51

☐ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... 7.01A FOAM BULK CHEMICAL SYSTEMS

# TDI

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
7A	BALL V/VALVE	AMBIENT-40	2585	STEEL
7.1	PUMP VIKING/SEALLESS MAG DR. FILTER FSI 25 µ	32-38	3878	STEEL BAG/FIBER
7.2	DUCT/EXTERNAL	AMBIENT-32	EST 1500	STEEL
7.3	TANK 6000 G	32-38	3878	STEEL
7.4	COMPRESSOR	EST 32	103	STEEL
7.5	ODOR MISCER ACT. CHARCOAL 4" PIPE +	AMBIENT-32	103	STEEL
7.6	RELIEF VALVE	AMBIENT-32	103	STEEL
7.7	VIKING/SEALLESS MAG DRIVE	32-38	3878	STEEL
7.8	FSI 25 µ	32-38	3878	STEEL BAG/FIBER
7.9	DUCT/EXTERNAL	AMBIENT-32	EST 1500	STEEL
7.10	PLATE	32-38	3878	STEEL

[X] Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01 B CASE/DOOR FOAM SYSTEM

TDI

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.30</u>	<u>500 G TANK</u>	<u>32-38</u>	<u>2068</u>	<u>STEEL</u>
<u>7.31</u>	<u>COMPRESSOR</u>	<u>EST 32</u>	<u>103</u>	<u>STEEL</u>
<u>7.32</u>	<u>DUCT/EXTERNAL</u>	<u>AMBIENT-32</u>	<u>EST 1530</u>	<u>STEEL</u>
<u>7.33</u>	<u>VIKING / POSITIVE DISPLACEMENT COND MULTIPATE SCRAPER</u>	<u>32-38</u>	<u>2068</u>	<u>STEEL</u>
<u>7.34</u>	<u>FSI 25 μ</u>	<u>32-38</u>	<u>2068</u>	<u>STEEL</u>
<u>7.35</u>	<u>FSI 25 μ</u>	<u>32-38</u>	<u>2068</u>	<u>STEEL</u>
<u>7.36</u>	<u>DUCT/EXTERNAL</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.37</u>	<u>FSI 25 μ</u>	<u>32-38</u>	<u>2068</u>	<u>STEEL</u>
<u>7.38</u>	<u>DUCT/EXTERNAL</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.39</u>	<u>RAM (METERING)</u>	<u>32-38</u>	<u>5171-77,565</u>	<u>STEEL</u>

☒ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 701B CASE/DOOR FOAM SYSTEM

TDI

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.40</u>	<u>DUCT/EXTERNAL</u>	<u>AMBIENT</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.41</u>	<u>POUR HEAD</u>	<u>32-38</u>	<u>5171-77.565</u>	<u>STEEL/Alloy</u>
<u>7.42</u>	<u>DUCT/EXTERNAL</u>	<u>AMBIENT</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.43</u>	<u>ERROR-DELETE</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>7.48</u>	<u>TANK 1000G</u>	<u>32-38</u>	<u>2068</u>	<u>STEEL</u>
<u>7.49</u>	<u>COMPRESSOR</u>	<u>EST 32</u>	<u>103</u>	<u>STEEL</u>
<u>7.50</u>	<u>DUCT/EXTERNAL</u>	<u>AMBIENT</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.51</u>	<u>PUMP</u>	<u>32-38</u>	<u>2068</u>	<u>STEEL</u>
<u>7.52</u>	<u>CUNO MULTI-PLATE SCRAPER</u>	<u>32-38</u>	<u>2068</u>	<u>STEEL</u>
<u>7.53</u>	<u>FSI 25μ</u>	<u>32-38</u>	<u>2068</u>	<u>STEEL BAG/FIBER</u>

☒ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 701 B CASE / DOOR FOAM SYSTEM  
TDI

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.54</u>	<u>DUCT/EXTERNAL</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.55</u>	<u>DUCT/EXTERNAL</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.56</u>	<u>VIKING JENSEN MAGNETIC DRIVE</u>	<u>32-38</u>	<u>5171-77565</u>	<u>STEEL</u>
<u>7.57</u>	<u>INJECTION HEAD/BOOTH DIGITAL WEIGH-MOBAY</u>	<u>32-38</u>	<u>5171-77,565</u>	<u>STEEL/STAINLESS STEEL</u>
<u>7.58</u>	<u>DUCT/EXHAUST</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.59</u>	<u>FOAM STATION/IND. INJECTION - SPEC. DESIGN</u>	<u>32-38</u>	<u>5171-77565</u>	<u>STEEL/STAINLESS STEEL</u>
<u>7.60</u>	<u>DUCT/EXHAUST</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

☒ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01A FOAM BULK CHEMICAL SYSTEMS  
Polyol

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.8</u>	<u>Ball 4/VALVE</u>	<u>AMBIENT</u>	<u>2585</u>	<u>STEEL</u>
<u>7.11</u>	<u>VIKING</u> <u>FSI 25M FILTER</u>	<u>AMBIENT-38</u>	<u>2500-4000</u> <u>2500-4000</u>	<u>STEEL</u> <u>BAG/FIBER</u>
<u>7.12</u>	<u>TANK 6000 G</u>	<u>AMBIENT-38</u>	<u>2500-4000</u>	<u>STEEL</u>
<u>7.13</u>	<u>DUCT/EXTERNAL</u>	<u>AMBIENT</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.14</u>	<u>VIKING + DIS.</u>	<u>AMBIENT-38</u>	<u>2500-4000</u>	<u>STEEL</u>
<u>7.15</u>	<u>FSI 25M</u>	<u>AMBIENT-38</u>	<u>2500-4000</u>	<u>STEEL</u> <u>BAG/FIBER</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

☒ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01 A FOAM BULK CHEMICAL SYSTEMS  
ADDITIVES

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.23</u>	<u>POSITIVE DISP</u>	<u>AMBIENT</u>	<u>&lt;3000</u>	<u>STEEL</u>
<u>7.24</u>	<u>TANK 8000G</u>	<u>AMBIENT</u>	<u>&lt;3000</u>	<u>STEEL</u>
<u>7.25</u>	<u>VIKING + DISP</u>	<u>AMBIENT</u>	<u>&lt;3000</u>	<u>STEEL</u>
<u>7.26</u>	<u>TANK 6000G</u>	<u>AMBIENT-32</u>	<u>ATMOSPHERE</u>	<u>STEEL</u>
<u>7.27</u>	<u>DOOR MISCER</u> <u>ACTIVATED CHARCOAL</u>	<u>AMBIENT-32</u>	<u>103</u>	<u>STEEL</u>
<u>7.28</u>	<u>DUCT/EXHAUST</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.26A</u>	<u>PUMP-VIKING+DIS</u>	<u>AMBIENT-32</u>	<u>&lt;4000</u>	<u>STEEL</u>
<u>7.29</u>	<u>DUCT/EXHAUST</u>	<u>AMBIENT</u>	<u>&lt;4000</u>	<u>STEEL</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

☒ Mark (X) this box if you attach a continuation sheet.



7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01A FOAM BULK CHEMICAL SYSTEMS

"MASTER BATCH" OR COMPONENT "B"

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.16</u>	<u>TANK - 6000 GAL</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u>
<u>7.17</u>	<u>VIKING + DIS</u> <u>FSI 25/4</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u> <u>BAG/FIBER</u>
<u>7.18</u>	<u>DUKT/EXHAUST</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.19</u>	<u>PLATE</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u>
<u>7.20</u>	<u>TANK 6000 GAL</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u>
<u>7.21</u>	<u>VIKING + DIS</u>	<u>25-38</u>	<u>4000-70,000</u>	<u>STEEL</u>
<u>7.22</u>	<u>PLATE</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

☒ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01B CASE/DOOR FOAM SYSTEM  
"MASTERBATCH" OR COMPONENT "B"

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.43</u>	<u>TANK 6000G</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u>
<u>7.44</u>	<u>DUCT/EXHAUST</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.45</u>	<u>VIKING + DISP.</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u>
<u>7.46</u>	<u>F5I 25μ</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u> <u>BAG/FIBER</u>
<u>7.47</u>	<u>VIKING + DISP.</u>	<u>25-38</u>	<u>4000-70,000</u>	<u>STEEL</u>
<u>7.61</u>	<u>TANK 6000G</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u>
<u>7.62</u>	<u>DUCT/EXHAUST</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>
<u>7.63</u>	<u>VIKING + DISP.</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u>
<u>7.64</u>	<u>F5I 25μ</u>	<u>25-38</u>	<u>&lt;4000</u>	<u>STEEL</u> <u>BAG/FIBER</u>
<u>7.65</u>	<u>VIKING + DISP.</u>	<u>25-38</u>	<u>4000-70,000</u>	<u>STEEL</u>

☒ Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01 B CASE/DOOR FOAM SYSTEM  
"MASTERBATCH" OR COMPONENT "B"

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
<u>7.66</u>	<u>INJECTION HEAD/BOOTH</u>	<u>25-38</u>	<u>4000-70,000</u>	<u>STEEL/STAINLESS</u>
<u>7.67</u>	<u>DIGITAL WEIGH-MOBAY</u>			<u>STEEL</u>
	<u>DUCT/EXHAUST</u>	<u>AMBIENT-32</u>	<u>EST 1500</u>	<u>STEEL</u>

☐ Mark (X) this box if you attach a continuation sheet.

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 701A FOAM Bulk Chemical Systems

Process Stream ID Code	Process Stream Description	Physical State <sup>1</sup>	Stream Flow (kg/yr)
{ 7H, 7J, 7N, 7O 7Q, 7R	Bulk TDI	OL	672,009
7I, 7L, 7M, 7P	EXHAUST DUCTS; BULK TDI	GC	NIL
7S, 7T, 7V, 7W, 7X	Polyol	OL	594,372
7H	Polyol TANK VENT	GU	NIL
7FF, 7GG, 7HH, 7II	R-II		
{ 7JJ, 7MM 7NN	POLYCAT "S" Catalyst (BULK) + OTHER ADDITIVES	OL OL, AL	{ 21,709

<sup>1</sup> Use the following codes to designate the physical state for each process stream:

GC = Gas (condensable at ambient temperature and pressure)  
 GU = Gas (uncondensable at ambient temperature and pressure)  
 SO = Solid  
 SY = Sludge or slurry  
 AL = Aqueous liquid  
 OL = Organic liquid  
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

☒ Mark (X) this box if you attach a continuation sheet.

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01A FOAM BULK CHEMICALS

Process Stream ID Code	Process Stream Description	Physical State <sup>1</sup>	Stream Flow (kg/yr)
<u>7kk</u>	<u>Polycat "8" Catalyst Bulk VENT</u>	<u>GC</u>	<u>UNKNOWN</u>
<u>7LL</u>	<u>{ Polycat "8" "SCRUBBER (DRY)"</u>	<u>GC</u>	<u>NIL</u>
	<u>VENT</u>		
<u>{ 7Y, 7Z, 7AA,</u>	<u>"MASTER BATCH" OR</u>	<u>OL</u>	<u>616,081</u>
<u>7BB, 7CC, 7DD</u>	<u>COMPONENT "B"</u>		
<u>7EE</u>			
<u>7.00</u>	<u>ADDITIVE EXHAUST DUCT</u>	<u>OL, AL</u>	<u>UNKNOWN</u>

<sup>1</sup>Use the following codes to designate the physical state for each process stream:

GC = Gas (condensable at ambient temperature and pressure)  
 GU = Gas (uncondensable at ambient temperature and pressure)  
 SO = Solid  
 SY = Sludge or slurry  
 AL = Aqueous liquid  
 OL = Organic liquid  
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

☒ Mark (X) this box if you attach a continuation sheet.

7.05 Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01 B CASE / DOOR FOAM SYSTEM

Process Stream ID Code	Process Stream Description	Physical State <sup>1</sup>	Stream Flow (kg/yr)
<u>TR, TRR, TSS</u> <u>TTT, TVV</u>	<u>DOOR LINE TDI SYSTEM</u>	<u>OL</u>	<u>672009</u>
<u>TXX, TYY, TAAA</u>	<u>DOOR LINE TDI SYSTEM</u>	<u>OL</u>	
<u>TKKK, TLLL, TMMM</u>	<u>CASE LINE TDI SYSTEM</u>	<u>OL</u>	
<u>T000, TRRR, TSSS</u>	<u>CASE LINE TDI SYSTEM</u>	<u>OL</u>	
<u>TTTT</u>	<u>CASE LINE TDI SYSTEM</u>	<u>OL</u>	<u>34</u>
<u>TQQ, TUU, TWW</u>	<u>DOOR LINE TDI EXH VENTS</u>	<u>GC</u>	
<u>TZZ, TBBB</u>	<u>DOOR LINE TDI EXH VENTS</u>	<u>GC</u>	
<u>TJJJ, TNNN, TQQQ, TUUU</u> <u>TEEE</u>	<u>CASE LINE TDI EXH VENTS</u>	<u>GC</u>	

<sup>1</sup> Use the following codes to designate the physical state for each process stream:

- GC = Gas (condensable at ambient temperature and pressure)
- GU = Gas (uncondensable at ambient temperature and pressure)
- SO = Solid
- SY = Sludge or slurry
- AL = Aqueous liquid
- OL = Organic liquid
- IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

☐ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s).  
If a process block flow diagram is provided for more than one process type, photocopy  
this question and complete it separately for each process type. (Refer to the  
CBI instructions for further explanation and an example.)

☐ Process type ..... 7.01A FOAM BULK CHEMICAL SYSTEMS

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds <sup>1</sup>	Concen- trations <sup>2,3</sup> (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
7H, 7J, 7N, 7O, 7Q, 7R	TDI CAS# 026471-62-5 * PREPOLYMER OF TDI AND PRO- POXYLATED GLYCERINE * PREPOLYMER OF TDI AND PRO- * * POXYLATED SUCROSE	60% 10-30% 10-30%	N/A N/A N/A	N/A N/A N/A
7I, 7L, 7P	SAME AS ABOVE	EST < 1 PPM	NONE	N/A
7M	SAME AS ABOVE	NIL	NONE	N/A

7.06 continued below

\* CAS # 039279-01-1  
\* \* CAS # 059154-64-2

☒ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type ..... 7.01A FOAM BULK CHEMICAL SYSTEMS

a. Process Stream ID Code	b. Known Compounds <sup>1</sup>	c. Concen- trations <sup>2,3</sup> (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7S, 7T, 7V	* BLEND of POLYETHER POLYOLS	UNKNOWN	N/A	N/A
7W, 7X	* BLEND of TERTIARY AMINES	UNKNOWN	N/A	N/A
7U	SAME AS ABOVE	UNKNOWN	N/A	N/A
7FF, 7GG	R-11	100%	NONE	NONE
7HH				

7.06 continued below

\* CAS #'s 025791-96-2  
029192-34-5  
029434-03-5  
009082-00-2

\*\* CAS #'s 000111-40-0  
000105-59-9

☒ Mark (X) this box if you attach a continuation sheet.



7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type ..... 7.01 A FOAM BULK CHEMICAL SYSTEMS

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds <sup>1</sup>	Concentrations <sup>2,3</sup> (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
<u>7JJ, 7MM</u>	<u>N,N DIMETHYLCYCLOHEXYL</u>	<u>100</u>	<u>N/A</u>	<u>N/A</u>
	<u>AMINE</u>			
<u>7NN</u>	<u>SILICONE</u>	<u>100%</u>	<u>N/A</u>	<u>N/A</u>
	<u>DIBUTYL TIN DILAURATE</u>		<u>N/A</u>	<u>N/A</u>
	<u>WATER</u>			

7.06 continued below

☒ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s).  
If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type ..... 7.01 B CASE/DOPA FOAM SYSTEM

a.	b.	c.	d.	e.
Process Stream ID Code	Known Compounds <sup>1</sup>	Concentrations <sup>2,3</sup> (% or ppm)	Other Expected Compounds	Estimated Concentrations (% or ppm)
7R, 7RR, 7SS, 7TT, 7VV, 7XX, 7YY, 7AA, 7KKK, 7LLL, 7MMM, 7OOO, 7RRR, 7SSS, 7TTT	TDI CAS# 026471-62-5 PREPOLYMER OF TDI AND PRO- POXYLATED GLYCERINE PREPOLYMER OF TDI AND PRO- POXYLATED SUCROSE	60% 10-30% 10-30%	NONE NONE NONE	N/A N/A N/A
7QQ, 7UU, 7WW, 7ZZ, 7BBB, 7JJJ, 7NNN, 7QQQ, 7UUU, 7EEE	SAME AS ABOVE	EST < 1 PPM	NONE	N/A

7.06 continued below

\* CAS# 039279-01-1  
\* CAS# 059154-64-2

☒ Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s).  
If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

☐ Process type ..... 7.01B CASE/DOOR FOAM SYSTEM

a. Process Stream ID Code	b. Known Compounds <sup>1</sup>	c. Concen- trations <sup>2,3</sup> (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7DDD, 7EEE, 7FFF 7GGG, 7HHH, 7WWW, 7XXX, 7YYY, 7AAAA, 7BBBB, 7DDDD 7ZZZ	N-N DIMETHYLCYCLOHEXYLAMINE DIBUTYL TIN DILAURATE WATER SILICONE 534D POLYOL	100%	NONE	N/A
7CCC, 7VVV 7UUU, 7CCCC	SAME AS ABOVE	UNKNOWN	NONE	N/A

7.06 continued below

☐ Mark (X) this box if you attach a continuation sheet.

7.06 (continued)

<sup>1</sup>For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column b. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
1	SILICONE 5340	0.01%
	N-N-CYCLOHEXYL AMINE	0.02%
	DIBUTYL TIN DILAUREATE	0.002%
2	WATER	41%
3		
4		
5		

<sup>2</sup>Use the following codes to designate how the concentration was determined:

- A = Analytical result  
 (E) = Engineering judgement/calculation

<sup>3</sup>Use the following codes to designate how the concentration was measured:

- V = Volume  
 (W) = Weight

☐ Mark (X) this box if you attach a continuation sheet.

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PART A RESIDUAL TREATMENT PROCESS DESCRIPTION

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8.01 In accordance with the instructions, provide a residual treatment block flow diagram which describes the treatment process used for residuals identified in question 7.01.

CBI

☐ Process type ..... 

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☐ Mark (X) this box if you attach a continuation sheet.

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PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process CBI type. (Refer to the instructions for further explanation and an example.)

☐ Process type ..... 7.01A FOAM BULK CHEMICAL SYSTEMS AND ★  
7.01B CASE/DOOR FOAM SYSTEMS

a. b. c. d. TDI e. f. g.

Stream ID Code	Type of Hazardous Waste <sup>1</sup>	Physical State of Residual <sup>2</sup>	Known Compounds <sup>3</sup>	Concentrations (% or ppm) <sup>4,5,6</sup>	Other Expected Compounds	Estimated Concentrations (% or ppm)
7H, 7I, 7J, 7L 7N, 7O, 7Q, 7R, 7RR, 7SS, 7TT, 7VV 7XY, 7YY, 7ZZ 7AA, 7III, 7KKK, 7LLL, 7MMM, 7OOO, 7PPP . 7QQQ, 7RRR, 7SSS, 7TTT	R, T	SOLID (SD)	REACTED 2-4 TDI AND 2-6 TDI	(W) EST 100%	UNKNOWN	N/A
SAME AS ABOVE	RT	LIQUID (OL)	TDI 026471625 Prepolymer of TDI AND prepo. sucrose Prepolymer of TDI AND prepo. glycerine	60% (W) 10-30% (W)	UNKNOWN	N/A
					UNKNOWN	N/A

8.05 continued below ★ WASTES ARE IDENTIFIED BY PROCESS STREAM,  
NOT PROCESS TYPE

☒ Mark (X) this box if you attach a continuation sheet.

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.).

a.	b.	c.	d.	e.	f.	g.
Stream ID Code	Type of Hazardous Waste <sup>1</sup>	Physical State of Residual <sup>2</sup>	Known Compounds <sup>3</sup>	Concentrations (% or ppm) <sup>4,5,6</sup>	Other Expected Compounds	Estimated Concentrations (% or ppm)
S, TT, TV, TW, TX Y, TAA, TBB, CC, TOD, TEE, WWW, TXXX YY, TZZZ, TAAAA BBBB, TDDDD	N/A	OL	POLYETHER POLYOL TERTIARY AMINES R-11 N,N DIMETHYL CYCLOHEXYLAMINE  SILICONE DIBUTYL TIN DILAURATE  WATER	EST 50-80%  EST 20% 0-18%  EST < 1% 21%  < 1%	Methylene Chloride (POSSIBLE)	0-58%

54 *A*

---

8.05 (continued)

<sup>1</sup>Use the following codes to designate the type of hazardous waste:

I = Ignitable  
C = Corrosive  
R = Reactive  
E = EP toxic  
T = Toxic  
H = Acutely hazardous

<sup>2</sup>Use the following codes to designate the physical state of the residual:

GC = Gas (condensable at ambient temperature and pressure)  
GU = Gas (uncondensable at ambient temperature and pressure)  
SO = Solid  
SY = Sludge or slurry  
AL = Aqueous liquid  
OL = Organic liquid  
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

-----  
8.05 continued below

---

☐ Mark (X) this box if you attach a continuation sheet.

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8.05 (continued)

<sup>3</sup>For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column d. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
1	SILICONE S340	0.01 %
	DIBUTYL TIN DILAURATE	0.002 %
	WATER	<1 %
2		
3		
4		
5		

<sup>4</sup>Use the following codes to designate how the concentration was determined:

A = Analytical result

☒ E = Engineering judgement/calculation

8.05 continued below

☐ Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

<sup>5</sup>Use the following codes to designate how the concentration was measured:

V = Volume  
 (W) = Weight

<sup>6</sup>Specify the analytical test methods used and their detection limits in the table below. Assign a code to each test method used and list those codes in column e.

<u>Code</u>	<u>Method</u>	<u>Detection Limit</u> (± ug/l)
<u>1</u>	<u>CHEMICAL ANALYSIS - METHOD UNKNOWN</u>	<u>UNKNOWN</u>
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		

☐ Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

7.01A FOAM BULK CHEMICAL SYSTEMS \*

☐

Process type .....

7.01B CASE/DOOR FOAM SYSTEMS

a.	b.	c.	d.	e.		f.	g.
Stream ID Code	Waste Description Code <sup>1</sup>	Management Method Code <sup>2</sup>	Residual Quantities (kg/yr)	Management of Residual (%)		Costs for Off-Site Management (per kg)	Changes in Management Methods
On-Site	Off-Site						
7XX	B69	3I/2I	735	0	100%	\$3.80	—
7H-7I, 7J, 7N							
7O, 7Q, 7R, 7RR							
7SS, 7TT, 7UU, 7VV, 7XX, 7YY							
7AAA, 7KKK, 7LLL	B82/84	2I	4725	0	100%	\$4.36	—
7MMM, 7OOO, 7RRR							
7SSS, 7TTT							
7S, 7T, 7V, 7W							
7X, 7Y, 7AA, 7BB, 7CC							
7DD, 7EE, 7DDD, 7EEE							
7FFF, 7GGG, 7HHH,							
7WWW, 7XXX							
7YYY, 7ZZZ,	B70	3I/2I	2564	0	100%	\$0.94	—
7AAAA, 7BBBB							
7DDDD							

<sup>1</sup>Use the codes provided in Exhibit 8-1 to designate the waste descriptions

<sup>2</sup>Use the codes provided in Exhibit 8-2 to designate the management methods

\* WASTES ARE IDENTIFIED BY PROCESS STREAM, EXCEPT AS NOTED

☐

Mark (X) this box if you attach a continuation sheet.

8.22/ Describe the combustion chamber design parameters for each of the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

☐ CBI

Incinerator	Combustion Chamber Temperature (°C)		Location of Temperature Monitor		Residence Time In Combustion Chamber (seconds)	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
1						
2						
3						

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes ..... 1

No ..... 2

8.23 Complete the following table for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

☐ CBI

Incinerator	Air Pollution Control Device <sup>1</sup>	Types of Emissions Data Available
1		
2		
3		

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes ..... 1

No ..... 2

<sup>1</sup>Use the following codes to designate the air pollution control device:

S = Scrubber (include type of scrubber in parenthesis)  
 E = Electrostatic precipitator  
 O = Other (specify) \_\_\_\_\_

☐ Mark (X) this box if you attach a continuation sheet.

PART A EMPLOYMENT AND POTENTIAL EXPOSURE PROFILE

9.01 Mark (X) the appropriate column to indicate whether your company maintains records on the following data elements for hourly and salaried workers. Specify for each data element the year in which you began maintaining records and the number of years the records for that data element are maintained. (Refer to the instructions for further explanation and an example.)

CBI

☐

Data Element	Data are Maintained for:		Year in Which Data Collection Began	Number of Years Records Are Maintained
	Hourly Workers	Salaried Workers		
Date of hire	<u>X</u>	<u>X</u>	<u>1973 (CO 1950's)</u>	<u>10</u>
Age at hire	<u>X</u>	<u>X</u>	<u>1973 (CO 1950's)</u>	<u>10</u>
Work history of individual before employment at your facility	<u>X</u>	<u>X</u>	<u>1973</u>	<u>EST 10</u>
Sex	<u>X</u>	<u>X</u>	<u>1973</u>	<u>10</u>
Race	<u>X</u>	<u>X</u>	<u>1973</u>	<u>10</u>
Job titles	<u>X</u>	<u>X</u>	<u>EARLY 1980's</u>	<u>10</u>
Start date for each job title	<u>X</u>	<u>X</u>	<u>EARLY 1980's</u>	<u>10</u>
End date for each job title	<u>X</u>	<u>X</u>	<u>EARLY 1980's</u>	<u>10</u>
Work area industrial hygiene monitoring data	<u>X</u>	<u>X</u>	<u>1977 *</u>	<u>30</u>
Personal employee monitoring data	<u>X</u>	<u>X</u>	<u>1983</u>	<u>30</u>
Employee medical history	<u>X</u>	<u>X</u>	<u>1973</u>	<u>30</u>
Employee smoking history	<u>X</u>	<u>X</u>	<u>1987</u>	<u>30</u>
Accident history	<u>X</u>	<u>X</u>	<u>1973</u>	<u>5 YRS</u>
Retirement date	<u>X</u>	<u>X</u>	<u>1973</u>	<u>10 YRS</u>
Termination date	<u>X</u>	<u>X</u>	<u>1973</u>	<u>10</u>
Vital status of retirees	<u>X</u>	<u>X</u>	<u>1973 (CO 1900's)</u>	<u>DEATH OR SURVIVORS BENEFITS EXPIRE</u>
Cause of death data	<u>X</u>	<u>X</u>	<u>1973 (CO 1970)</u>	<u>FOREVER</u>

\* OPERATION STARTED IN 1977 (SOME EMPLOYEES HIRED IN 1973)

☐ Mark (X) this box if you attach a continuation sheet.

9.02 In accordance with the instructions, complete the following table for each activity in which you engage.

CBI

(1988)

☐

a.	b.	c.	d.	e.
Activity	Process Category	Yearly Quantity (kg)	Total Workers	Total Worker-Hours
Manufacture of the listed substance	Enclosed	N/A		
	Controlled Release	N/A		
	Open	N/A		
On-site use as reactant	Enclosed	N/A		
	Controlled Release	672,009	15	22,003
	Open	N/A		
On-site use as nonreactant	Enclosed	N/A		
	Controlled Release	N/A		
	Open	N/A		
On-site preparation of products	Enclosed	N/A		
	Controlled Release	N/A		
	Open	N/A		

☐ Mark (X) this box if you attach a continuation sheet.

9.03 Provide a descriptive job title for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance.

CBI

☐

Labor Category

Descriptive Job Title

A

FOAM CONTROL PERSON (DOORS)

B

RELIEF OPERATORS (NORMAL PRODUCTION OPERABLE)

C

FOAM CONTROL PERSON (CASE)

D

PROCESS CONTROL ENGINEERS

E

STATION ATTENDANTS

F

DEV. ENGINEERS

G

ADV. Mfg. ENGINEERS OR Mfg Eng

H

MATERIAL HANDLERS

I

INDUSTRIAL HYGIENISTS

J

SAFETY/ENVIRONMENTAL ENGINEERS

☒ Mark (X) this box if you attach a continuation sheet.

9.03 Provide a descriptive job title for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance.

CBI

☐

Labor Category

Descriptive Job Title

A |

SECURITY PERSONNEL

B |

QC LAB TECHNICIAN

C |

QC INSPECTORS

D |

QC ENGINEERS

E |

MAINTENANCE

F

G

H

I

J

☐ Mark (X) this box if you attach a continuation sheet.



9.04 In accordance with the instructions, provide your process block flow diagram(s) and indicate associated work areas.

CBI

☐ Process type .....

SEE ATTACHED FLOW  
CHARTS PP 42A AND 42B  
(ATTACHED UNDER NEATH)

WORK AREA 1 = PROCESS 7.01A (FOAM BULK CHEMICAL  
SYSTEMS) P 42A

WORK AREA 2 = DOOR POUR STATION 7.41 (7.01B PROCESS  
P. 42 B)

WORK AREA 3 = CASE POUR STATIONS 7.59 (7.01B PROCESS  
P. 42 B)

WORK AREA 4 = ALL OTHER (FOAM DECK OR  
METERING DECK)

THIS IS IDENTIFIED ON PROCESS 7.01B,  
P. 42B AS

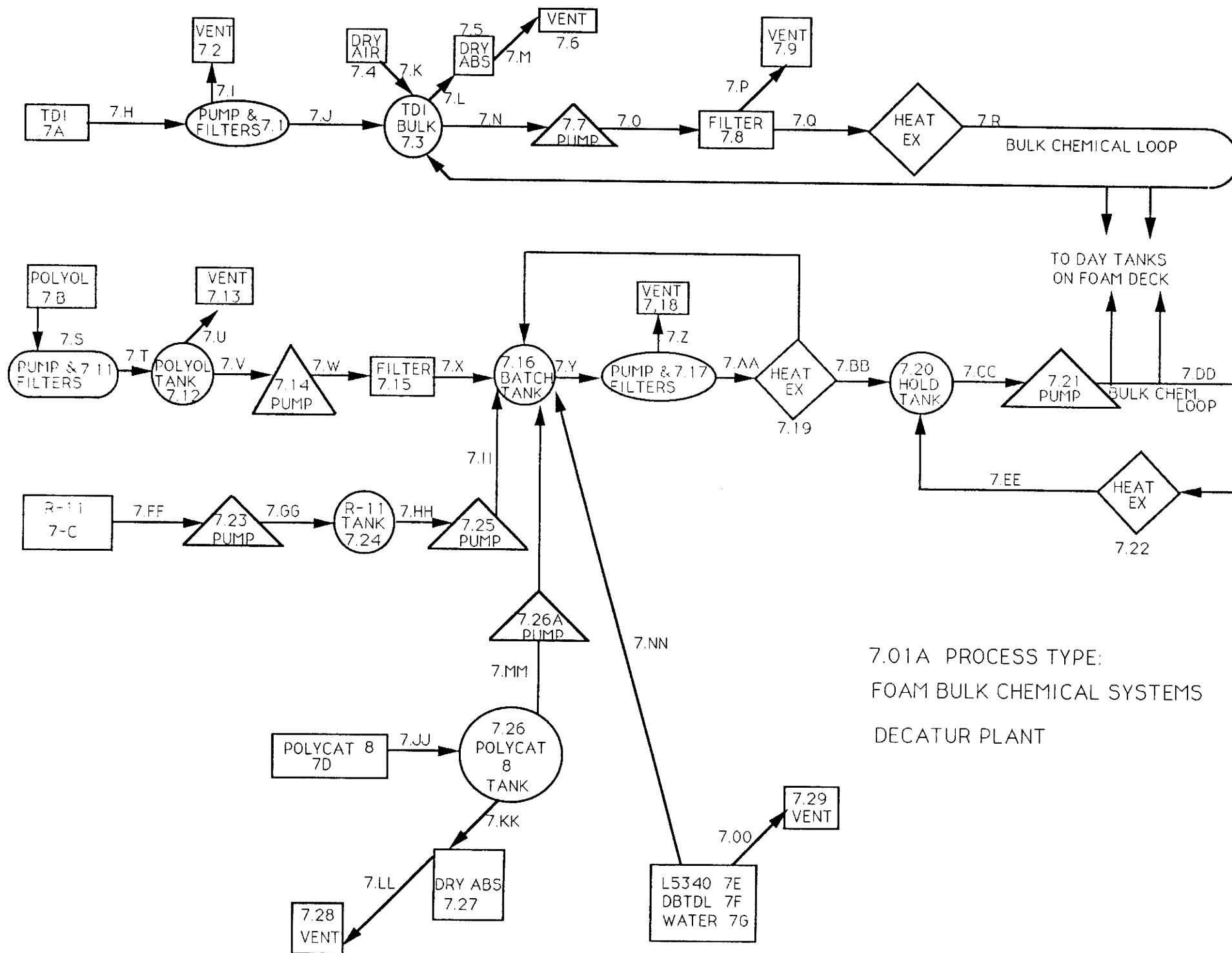
7R through 7.39

7EE THROUGH 7.47

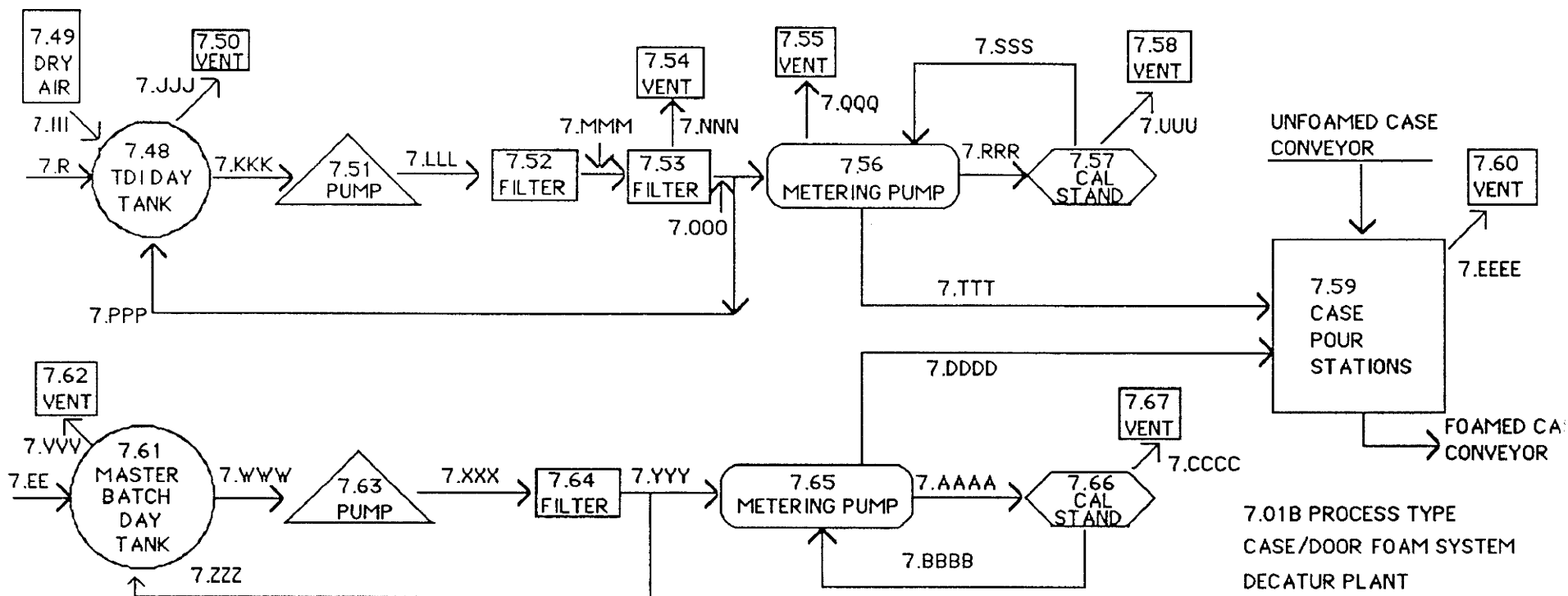
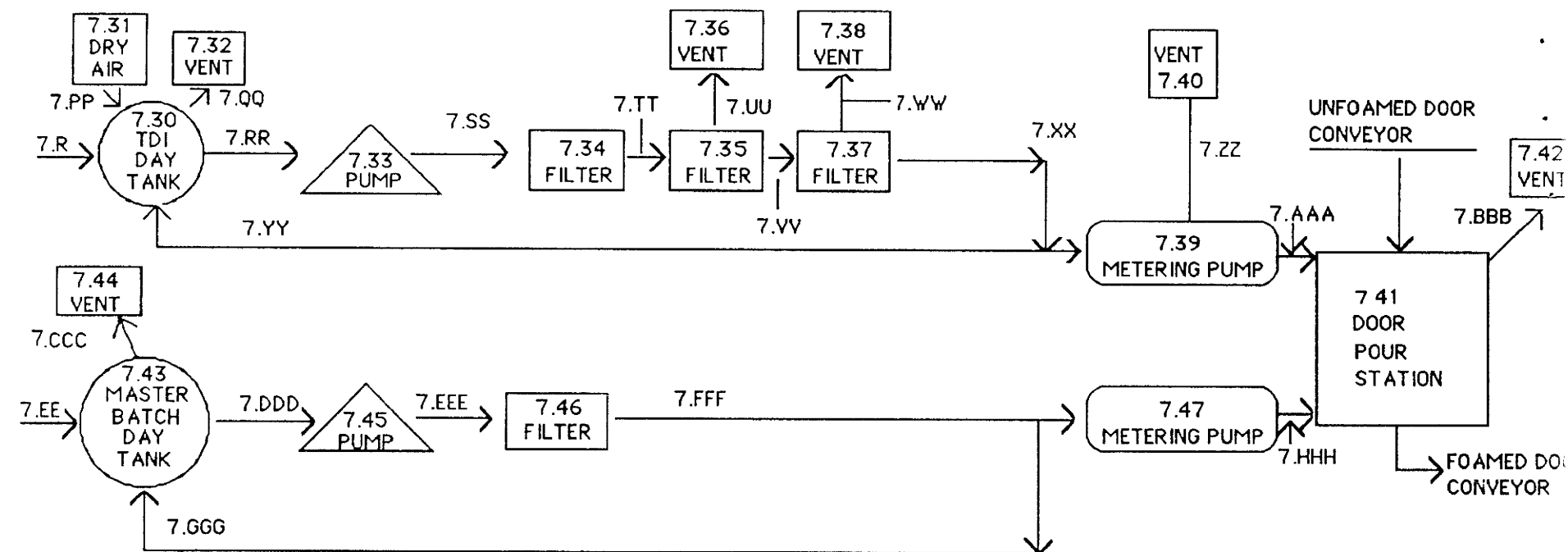
7R TO 7.TTT

7EE TO 7.DDDD

☒ Mark (X) this box if you attach a continuation sheet.



7.01A PROCESS TYPE:  
FOAM BULK CHEMICAL SYSTEMS  
DECATUR PLANT



9.05 Describe the various work area(s) shown in question 9.04 that encompass workers who may potentially come in contact with or be exposed to the listed substance. Add any additional areas not shown in the process block flow diagram in question 7.01 or 7.02. Photocopy this question and complete it separately for each process type.

CBI

7.01A FOAM BULK CHEMICAL SYSTEMS

☐

Process type .....

7.01B CASE/DOOR FOAM SYSTEM

Work Area ID

Description of Work Areas and Worker Activities

1

BULK CHEMICAL UNLOADING, STORAGE, FILTERING. INVOLVES BLENDING OF COMPONENT "B" OR MASTERBATCH

2

DOORS ARE FOAMED AT THE DOOR FOAM STATION. WORKERS OBSERVE, CLEAN AND CHANGE FOAM HEADS

3

CASES ARE FOAMED. WORKERS ATTEND CASE FOAM STATIONS, MONITOR OPERATIONS - CHANGE PANELS, FIXTURES, FOAM HEADS, ETC.

4

FOAM METEERING OPERATIONS - MATERIALS ARE STORED, FILTERED AND DELIVERED TO USE SYSTEMS. TOTAL SYSTEM

5

MONITORED FROM THIS AREA. CALIBRATIONS PERFORMED HERE. ALL MAINTENANCE DONE HERE.

6

7

8

9

10

☐

Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area. 1988

☐ Process type ..... 7.01A FOAM BULK CHEMICALS

Work area ..... 1

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance <sup>1</sup>	Average Length of Exposure Per Day <sup>2</sup>	Number of Days per Year Exposed
C	4	SKIN/INHALATION	OL/GC	A	191
D	4	INHALATION	GC	A	191
F	3	SKIN/INHALATION	OL/GC	A	50 EST
G	2	SKIN/INHALATION	OL/GC	A	191
H	4	SKIN/INHALATION	OL/GC	A	24
I	1	SKIN/INHALATION	OL/GC	A	52
J	1	SKIN/INHALATION	OL/GC	A	52
A-1	3	INHALATION	GC	A	365
B-1	2	SKIN/INHALATION	OL/GC	A	191
E-1	50	SKIN/INHALATION	OL/GC	A	191

<sup>1</sup>Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensable at ambient temperature and pressure)  
 GU = Gas (uncondensable at ambient temperature and pressure; includes fumes, vapors, etc.)  
 SO = Solid

SY = Sludge or slurry  
 AL = Aqueous liquid  
 OL = Organic liquid  
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

<sup>2</sup>Use the following codes to designate average length of exposure per day:

A = 15 minutes or less  
 B = Greater than 15 minutes, but not exceeding 1 hour  
 C = Greater than one hour, but not exceeding 2 hours

D = Greater than 2 hours, but not exceeding 4 hours  
 E = Greater than 4 hours, but not exceeding 8 hours  
 F = Greater than 8 hours

☐ Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI ☐ Process type ..... 7.01B DOOR/CASE FOAM SYSTEM 1988  
Work area ..... 2

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance <sup>1</sup>	Average Length of Exposure Per Day <sup>2</sup>	Number of Days per Year Exposed
<u>A</u>	<u>2</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>E</u>	<u>191</u>
<u>B</u>	<u>7</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>D</u>	<u>191</u>
<u>D</u>	<u>4</u>	<u>INHALATION</u>	<u>GC</u>	<u>A</u>	<u>191</u>
<u>F</u>	<u>3</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>50 EST</u>
<u>G</u>	<u>2</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>191</u>
<u>H</u>	<u>4</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>24</u>
<u>I</u>	<u>1</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>52</u>
<u>J</u>	<u>1</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>52</u>
<u>C-1</u>	<u>2</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>191</u>
<u>E-1</u>	<u>50</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>191</u>

<sup>1</sup>Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensable at ambient temperature and pressure)  
GU = Gas (uncondensable at ambient temperature and pressure; includes fumes, vapors, etc.)  
SO = Solid

SY = Sludge or slurry  
AL = Aqueous liquid  
OL = Organic liquid  
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

<sup>2</sup>Use the following codes to designate average length of exposure per day:

A = 15 minutes or less  
B = Greater than 15 minutes, but not exceeding 1 hour  
C = Greater than one hour, but not exceeding 2 hours

D = Greater than 2 hours, but not exceeding 4 hours  
E = Greater than 4 hours, but not exceeding 8 hours  
F = Greater than 8 hours

☐ Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area.

☐ Process type ..... 7.01 B CASE/DOOR FOAM SYSTEM 1988

Work area ..... 3

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance <sup>1</sup>	Average Length of Exposure Per Day <sup>2</sup>	Number of Days per Year Exposed
<u>C</u>	<u>4</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>E</u>	<u>191</u>
<u>E</u>	<u>12</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>E</u>	<u>191</u>
<u>D</u>	<u>4</u>	<u>INHALATION</u>	<u>GC</u>	<u>A</u>	<u>191</u>
<u>G</u>	<u>2</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>B</u>	<u>191</u>
<u>H</u>	<u>4</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>24</u>
<u>I</u>	<u>1</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>52</u>
<u>J</u>	<u>1</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>52</u>
<u>A-1</u>	<u>3</u>	<u>INHALATION</u>	<u>GC</u>	<u>A</u>	<u>365</u>
<u>C-1</u>	<u>2</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>191</u>
<u>D-1</u>	<u>1</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>52</u>
<u>E-1</u>	<u>50</u>			<u>A</u>	<u>191</u>

<sup>1</sup>Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensable at ambient temperature and pressure)  
 GU = Gas (uncondensable at ambient temperature and pressure; includes fumes, vapors, etc.)  
 SO = Solid

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 AL = Aqueous liquid  
 OL = Organic liquid  
 IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

<sup>2</sup>Use the following codes to designate average length of exposure per day:

A = 15 minutes or less  
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 C = Greater than one hour, but not exceeding 2 hours

D = Greater than 2 hours, but not exceeding 4 hours  
 E = Greater than 4 hours, but not exceeding 8 hours  
 F = Greater than 8 hours

☐ Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area.

☐ Process type ..... 7.01 B CASE/DOOR FORM SYSTEM 1988  
Work area ..... 4

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance <sup>1</sup>	Average Length of Exposure Per Day <sup>2</sup>	Number of Days per Year Exposed
<u>A</u>	<u>2</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>191</u>
<u>C</u>	<u>4</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>191</u>
<u>D</u>	<u>4</u>	<u>INHALATION</u>	<u>GC</u>	<u>A</u>	<u>191</u>
<u>G</u>	<u>2</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>191</u>
<u>H</u>	<u>4</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>24</u>
<u>I</u>	<u>1</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>52</u>
<u>J</u>	<u>1</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>52</u>
<u>A-1</u>	<u>3</u>	<u>INHALATION</u>	<u>GC</u>	<u>A</u>	<u>365</u>
<u>B-1</u>	<u>2</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>52</u>
<u>C-1</u>	<u>2</u>	<u>SKIN/INHALATION</u>	<u>OL/GC</u>	<u>A</u>	<u>191</u>
<u>E-1</u>	<u>50</u>	<u>SKIN/INHALATION</u>		<u>A</u>	<u>191</u>

<sup>1</sup>Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensible at ambient temperature and pressure)  
GU = Gas (uncondensable at ambient temperature and pressure; includes fumes, vapors, etc.)  
SO = Solid

SY = Sludge or slurry  
AL = Aqueous liquid  
OL = Organic liquid  
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

<sup>2</sup>Use the following codes to designate average length of exposure per day:

A = 15 minutes or less  
B = Greater than 15 minutes, but not exceeding 1 hour  
C = Greater than one hour, but not exceeding 2 hours

D = Greater than 2 hours, but not exceeding 4 hours  
E = Greater than 4 hours, but not exceeding 8 hours  
F = Greater than 8 hours

☐ Mark (X) this box if you attach a continuation sheet.



9.07 For each labor category represented in question 9.06, indicate the 8-hour Time Weighted Average (TWA) exposure levels and the 15-minute peak exposure levels. Photocopy this question and complete it separately for each process type and work area.

CBI

7.01A FOAM BULK CHEMICAL SYSTEMS

☐ Process type ..... 7.01B CASE/ADPR FOAM SYSTEMS

Work area ..... ALL

Labor Category	8-hour TWA Exposure Level (ppm, mg/m <sup>3</sup> , other-specify)	15-Minute Peak Exposure Level (ppm, mg/m <sup>3</sup> , other-specify)
ALL	<0.005 ppm	Generally <0.02 ppm

☐ Mark (X) this box if you attach a continuation sheet.

PART B WORK PLACE MONITORING PROGRAM

9.08 If you monitor worker exposure to the listed substance, complete the following table.

CBI

☐

Sample/Test	Work Area ID	Testing Frequency (per year)	Number of Samples (per test)	Who Samples <sup>1</sup>	Analyzed In-House (Y/N)	Number of Years Records Maintained
Personal breathing zone	<u>2,3,4</u>	<u>NONE</u>	<u>1</u>	<u>A/C</u>	<u>N</u>	<u>30+</u>
General work area (air)	<u>ALL</u>	<u>CONTINUOUS</u>	<u>CONTINUOUS</u>	<u>R<sub>1</sub></u>	<u>Y</u>	<u>30+</u>
Wipe samples						
Adhesive patches						
Blood samples						
Urine samples						
Respiratory samples						
Allergy tests						
Other (specify)						
<u>RAST ANTIBODY</u>	<u>ALL</u>	<u>AS NEEDED</u>	<u>1</u>	<u>D.</u>		<u>30</u>
Other (specify)		<u>or RECOMMENDED</u>				
<u>PFT</u>	<u>ALL</u>	<u>1</u>	<u>3</u>	<u>D</u>	<u>Y</u>	<u>30</u>
Other (specify)						

<sup>1</sup>Use the following codes to designate who takes the monitoring samples:

A = Plant industrial hygienist

B = Insurance carrier

C = OSHA consultant

D = Other (specify) MD/RN

☐ Mark (X) this box if you attach a continuation sheet.

9.09 For each sample type identified in question 9.08, describe the type of sampling and analytical methodology used for each type of sample.

☐

Sample Type

Sampling and Analytical Methodology

PERSONAL

INTEGRATED / IMPINGER / NITRO REAGENT / ETHANOL EXTRACTION LIQUID CHROMATOGRAPHY

CONTINUOUS

MDA 7005/7100 PHOTO-OPTIC (REFLECTANCE/COLORIMETRIC PAPER TAP MONITOR)

RAST

BLOOD ANTIGEN / RAST ANTIBODY TITER

PFT

NO PARAMETERS - INCLUDES MUV ON EMERGENCY RESPONDERS

9.10 If you conduct personal and/or ambient air monitoring for the listed substance, specify the following information for each equipment type used.

CBI

☐

Equipment Type<sup>1</sup>

Detection Limit<sup>2</sup>

Manufacturer

Averaging Time (hr)

Model Number

D (IMPINGER)

EST 0.005 A

VARIOUS

0.25

N/A

H CONTINUOUS

< 0.005 A

MDA

10 MIN (STEL)

7005/7100

<sup>1</sup>Use the following codes to designate personal air monitoring equipment types:

A = Passive dosimeter

B = Detector tube

C = Charcoal filtration tube with pump

D = Other (specify) \_\_\_\_\_

Use the following codes to designate ambient air monitoring equipment types:

E = Stationary monitors located within work area

F = Stationary monitors located within facility

G = Stationary monitors located at plant boundary

H = Mobile monitoring equipment (specify) \_\_\_\_\_

I = Other (specify) \_\_\_\_\_

<sup>2</sup>Use the following codes to designate detection limit units:

A = ppm

B = Fibers/cubic centimeter (f/cc)

C = Micrograms/cubic meter ( $\mu\text{m}^3$ )

☐

Mark (X) this box if you attach a continuation sheet.

9.11 If you conduct routine medical tests for monitoring the health effects of exposure to the listed substance, specify the type and frequency of the tests.

CBI

☐

Test Description

Frequency

(weekly, monthly, yearly, etc.)

PULMONARY FUNCTION

PEE PLACEMENT, AFTER 6 MONTHS  
ON JOB & TDI; ANNUALLY  
THEREAFTER. ALSO AFTER  
EXPOSURE/COMPLAINT/  
REFERENCE.

☐

Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

7.01A FOAM BULK CHEMICALS

☐

Process type .....

7.01B CASE/DOOR FOAM SYSTEM

Work area .....

ALL

1, 2, 3, 4

<u>Engineering Controls</u>	<u>Used (Y/N)</u>	<u>Year Installed</u>	<u>Upgraded (Y/N)</u>	<u>Year Upgraded</u>
Ventilation:				
Local exhaust	<u>Y</u>	<u>1976</u>	<u>Y</u>	<u>1983-4</u>
General dilution	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Other (specify)				
<u>PROCESS ISOLATION</u>	<u>Y</u>	<u>1987</u>	<u>-</u>	<u>-</u>
Vessel emission controls	<u>Y</u>	<u>1988</u>	<u>-</u>	<u>-</u>
Mechanical loading or packaging equipment	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Other (specify)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

☐

Mark (X) this box if you attach a continuation sheet.

9.13 Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.

CBI

7.01A FOAM Bulk CHEMICAL SYSTEMS

[ ] Process type ..... 7.01B CASE/DOOR FOAM SYSTEM

Work area ..... ALL 1, 2, 3, 4

Equipment or Process Modification	Reduction in Worker Exposure Per Year (%)
ALL ISOCYANATE USE/STORAGE AREAS WERE	90% of workers
ENCLOSED (TOTALLY) ISOLATING FOAM PROCESSES	POTENTIAL EXPOSURE
FROM REMAINDER OF FACTORY. VENTILATION ENCLOSURES	ELIMINATED
WITHIN ENCLOSURES WERE INSTALLED. ISOLATION	
PROCESS (-)PRESSURE AND INDIVIDUAL VENTILATION	
SYSTEM ALARMS WERE INSTALLED (1987)	

7.01B INSTALLED CLOSED LOOP  
CALIBRATION SYSTEM

100% ELIMINATION  
OF EXPOSURE DURING  
CALIBRATION: 100%  
ELIMINATION OF WASTE  
GENERATION FROM  
CALIBRATION.

[ ] Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

☐

Process type .....

7.01A FOAM BULK CHEMICAL PROCESS

7.01B CASE/DOOR FOAM SYSTEM

Work area .....

ALL 1,2,3,4

<u>Equipment Types</u>	<u>Wear or Use (Y/N)</u>
Respirators	✓
Safety goggles/glasses	✓
Face shields	✓
Coveralls	✓
Bib aprons	✓
Chemical-resistant gloves	✓
Other (specify)	
BOOTS/ BOOTIES	✓

☐ Mark (X) this box if you attach a continuation sheet.

9.15 If workers use respirators when working with the listed substance, specify for each process type, the work areas where the respirators are used, the type of respirators used, the average usage, whether or not the respirators were fit tested, and the type and frequency of the fit tests. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01 A FOAM BULK CHEMICAL SYSTEM  
7.01 B CASE/DOOR FOAM SYSTEM

Work Area	Respirator Type	Average Usage <sup>1</sup>	Fit Tested (Y/N)	Type of Fit Test <sup>2</sup>	Frequency of Fit Tests (per year)
1	+P Airline Supplied or SCBA	C	Y	QL	UNKNOWN *
2	+P Airline Supplied or SCBA	B	Y	QL	UNKNOWN
3	+P Airline Supplied or SCBA	B	Y	QL	UNKNOWN
4	+P Airline Supplied or SCBA	B	Y	QL	UNKNOWN

<sup>1</sup>Use the following codes to designate average usage:

A = Daily  
B = Weekly  
C = Monthly  
D = Once a year  
E = Other (specify) \_\_\_\_\_

<sup>2</sup>Use the following codes to designate the type of fit test:

QL = Qualitative  
QT = Quantitative

\* should be per/use

☐ Mark (X) this box if you attach a continuation sheet.



PART E WORK PRACTICES

- 9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this question and complete it separately for each process type and work area.

CBI

☐

7.01A FOAM BULK CHEMICAL SYSTEMS

Process type ..... 7.01B CASE/DOOR FOAM SYSTEMS

Work area ..... ALL 1,2,3,4

RESTRICTED ENTRY; PROCESS ISOLATION; WARNING SIGNS, TRAINING,  
MONITORING OF WORKPLACE; PROHIBITED OPEN CONTAINERS OF  
ISOCYANATE/OPEN UP CALIBRATION; REQUIRE AIR LINE SUPPLIED  
RESPIRATOR (+P) AND FULL SUIT-UP WHERE "POTENTIAL" ISOCYANATE  
EXPOSURE EXISTS; PROHIBIT EXPOSURE TO THOSE AT HIGH RISK VIA MEDICAL SCREEN -

- 9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type ..... 7.01A PROCESS - FOAM BULK CHEMICALS / 7.01B CASE/DOOR FOAM SYS

Work area .....

Housekeeping Tasks	Less Than Once Per Day	1-2 Times Per Day	3-4 Times Per Day	More Than 4 Times Per Day
Sweeping			X *	
Vacuuming	X			
Water flushing of floors	NO			
Other (specify)				
NEUTRALIZATION	X			

\* NOT OF RAW TDI - BUT OF URETHANE FOAM

☐ Mark (X) this box if you attach a continuation sheet.

9.21 Do you have a written medical action plan for responding to routine or emergency exposure to the listed substance?

Routine exposure

Yes ..... ①

No ..... 2

Emergency exposure

Yes ..... ①

No ..... 2

If yes, where are copies of the plan maintained?

Routine exposure: PLANT DISPENSARY

Emergency exposure: PLANT DISPENSARY

9.22 Do you have a written leak and spill cleanup plan that addresses the listed substance? Circle the appropriate response.

Yes ..... ①

No ..... 2

If yes, where are copies of the plan maintained? THROUGHOUT PLANT

Has this plan been coordinated with state or local government response organizations? Circle the appropriate response.

Yes ..... ①

No ..... 2

9.23 Who is responsible for monitoring worker safety at your facility? Circle the appropriate response.

Plant safety specialist ..... ①

Insurance carrier ..... 2

OSHA consultant ..... 3

Other (specify) DEPARTMENTAL SAFETY REAS AND TEAM LEADERS ..... ④

☐ Mark (X) this box if you attach a continuation sheet.

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SECTION 10 ENVIRONMENTAL RELEASE

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General Instructions:

Complete Part E (questions 10.23-10.35) for each non-routine release involving the listed substance that occurred during the reporting year. Report on all releases that are equal to or greater than the listed substance's reportable quantity value, RQ, unless the release is federally permitted as defined in 42 U.S.C. 9601, or is specifically excluded under the definition of release as defined in 40 CFR 302.3(22). Reportable quantities are codified in 40 CFR Part 302. If the listed substance is not a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and, thus, does not have an RQ, then report releases that exceed 2,270 kg. If such a substance however, is designated as a CERCLA hazardous substance, then report those releases that are equal to or greater than the RQ. The facility may have answered these questions or similar questions under the Agency's Accidental Release Information Program and may already have this information readily available. Assign a number to each release and use this number throughout this part to identify the release. Releases over more than a 24-hour period are not single releases, i.e., the release of a chemical substance equal to or greater than an RQ must be reported as a separate release for each 24-hour period the release exceeds the RQ.

For questions 10.25-10.35, answer the questions for each release identified in question 10.23. Photocopy these questions and complete them separately for each release.

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PART A GENERAL INFORMATION

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10.01 Where is your facility located? Circle all appropriate responses.

CBI

- ☐ Industrial area ..... ①
- Urban area ..... 2
- Residential area ..... ③
- Agricultural area ..... 4
- Rural area ..... 5
- Adjacent to a park or a recreational area ..... *VIRTUALLY* ⑥
- Within 1 mile of a navigable waterway ..... ⑦
- Within 1 mile of a school, university, hospital, or nursing home facility ..... ⑧
- Within 1 mile of a non-navigable waterway ..... ⑨
- Other (specify) \_\_\_\_\_ ..... 10

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☐ Mark (X) this box if you attach a continuation sheet.

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10.02 Specify the exact location of your facility (from central point where process unit is located) in terms of latitude and longitude or Universal Transverse Mercader (UTM) coordinates.

Latitude ..... 343 ° 50 , 30 "

Longitude ..... 086 ° 56 , 45 "

UTM coordinates ..... Zone \_\_\_\_\_, Northing \_\_\_\_\_, Easting \_\_\_\_\_

~~10.03 If you monitor meteorological conditions in the vicinity of your facility, provide the following information.~~

~~Average annual precipitation ..... inches/year~~

~~Predominant wind direction .....~~

10.04 Indicate the depth to groundwater below your facility.

Depth to groundwater ..... meters

10.05 For each on-site activity listed, indicate (Y/N/NA) all routine releases of the listed substance to the environment. (Refer to the instructions for a definition of CBI Y, N, and NA.)

☐

On-Site Activity	Environmental Release		
	Air	Water	Land
Manufacturing	N/A	N/A	N/A
Importing	N/A	N/A	N/A
Processing	✓	N/A	N/A
Otherwise used	N/A	N/A	N/A
Product or residual storage	N/A	N/A	N/A
Disposal	N/A	N/A	N/A
Transport	N/A	N/A	N/A

☐ Mark (X) this box if you attach a continuation sheet.

10.06 Provide the following information for the listed substance and specify the level of precision for each item. (Refer to the instructions for further explanation and an example.)

CBI

1988

☐

Quantity discharged to the air .....	<u>34</u>	kg/yr ± <u>10</u> %
Quantity discharged in wastewaters .....	<u>N/A</u>	kg/yr ± <u>-</u> %
Quantity managed as other waste in on-site treatment, storage, or disposal units .....	<u>5460</u>	kg/yr ± <u>1</u> %
Quantity managed as other waste in off-site treatment, storage, or disposal units .....	<u>5460</u>	kg/yr ± <u>1</u> %

☐ Mark (X) this box if you attach a continuation sheet.

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01A FOAM BULK CHEMICAL SYSTEMS

<u>Stream ID Code</u>	<u>Control Technology</u>	<u>Percent Efficiency</u>
<u>7M</u>	<u>DRY SCRAMBLER (ABSORBER)</u>	<u>90%</u>
<u>7I</u>	<u>NONE</u>	<u>N/A</u>
<u>7P</u>	<u>NONE</u>	<u>N/A</u>

☒ Mark (X) this box if you attach a continuation sheet.

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01B CASE/ DOOR FOAM SYSTEM

<u>Stream ID Code</u>	<u>Control Technology</u>	<u>Percent Efficiency</u>
<u>7.QQ</u>	<u>NONE</u>	<u>N/A</u>
<u>7.UU</u>	<u>NONE</u>	<u>N/A</u>
<u>7.WW</u>	<u>NONE</u>	<u>N/A</u>
<u>7.ZZ</u>	<u>NONE</u>	<u>N/A</u>
<u>7.JJJ</u>	<u>NONE</u>	<u>N/A</u>
<u>7.NNN</u>	<u>NONE</u>	<u>N/A</u>
<u>7.QQQ</u>	<u>NONE</u>	<u>N/A</u>
<u>7.UUU</u>	<u>NONE</u>	<u>N/A</u>
<u>7.EEEE</u>	<u>NONE</u>	<u>N/A</u>
<u>7.BBB</u>	<u>NONE</u>	<u>N/A</u>

☐ Mark (X) this box if you attach a continuation sheet.

PART B RELEASE TO AIR

- 10.09 Point Source Emissions -- Identify each emission point source containing the listed substance in terms of a Stream ID Code as identified in your process block or residual treatment block flow diagram(s), and provide a description of each point source. Do not include raw material and product storage vents, or fugitive emission sources (e.g., equipment leaks). Photocopy this question and complete it separately for each process type.

CBI

☐

7.01A FOAM BULK CHEMICAL SYSTEM

Process type .....

7.01B CASE / DOOR FOAM SYSTEM

+

Point Source  
ID Code

Description of Emission Point Source

7.I	UNLOADING PUMP + FILTER VENTS
7.P	RECIRCULATION FILTER VENTS
7.UU	DOOR LINE FILTER VENT (ON FOAM DECK)
7.WW	DOOR POUR STATION FILTER VENT
7.ZZ	RAM (METERING PUMP) VENT
7.BBB	DOOR POUR STATION VENT
7.NNN	CASE LINE FILTER VENT
7.QQQ	METERING PUMP STAND VENT
7.UUU	CALIBRATION STAND VENT
7.EEEE	CASE FOAM SYSTEMS (POUR) VENTS

\* EMERGENCY VENT FOR METERING DECK  
NOT SHOWN

☐ Mark (X) this box if you attach a continuation sheet.



10.10 Emission Characteristics -- Characterize the emissions for each Point Source ID Code identified in question 10.09 by completing the following table.

**BASED ON 1988**

Point Source ID Code	Physical State <sup>1</sup>	Average Emissions (kg/day)	Frequency <sup>2</sup> (days/yr)	Duration <sup>3</sup> (min/day)	Average Emission Factor <sup>4</sup>	Maximum Emission Rate (kg/min)	Maximum Emission Rate Frequency (events/yr)	Maximum Emission Rate Duration (min/event)
7I	V	0.176	191	960	$2.27 \times 10^{-5}$	unknown*	unknown*	unknown
7P	V		191	960	$2.27 \times 10^{-5}$	unknown	unknown	unknown
7WU	V		191	960	$2.27 \times 10^{-5}$	unknown	unknown	unknown
7WW	V		191	960	$2.27 \times 10^{-5}$	unknown	unknown	unknown
7ZZ	V		191	960	$2.27 \times 10^{-5}$	unknown	unknown	unknown
7BBB	V		191	960	$2.27 \times 10^{-5}$	unknown	unknown	unknown
7NNN	V		191	960	$2.27 \times 10^{-5}$	unknown	unknown	unknown
7AAA	V		191	960	$2.27 \times 10^{-5}$	unknown	unknown	unknown
7UUU	V		191	960	$2.27 \times 10^{-5}$	unknown	unknown	unknown
7.EEE	V		191	960	$2.27 \times 10^{-5}$	unknown	unknown	unknown

<sup>1</sup>Use the following codes to designate physical state at the point of release:

G = Gas; V = Vapor; P = Particulate; A = Aerosol; O = Other (specify) \_\_\_\_\_

<sup>2</sup>Frequency of emission at any level of emission

<sup>3</sup>Duration of emission at any level of emission

<sup>4</sup>Average Emission Factor — Provide estimated ( $\pm 25$  percent) emission factor (kg of emission per kg of production of listed substance)

\* MAX EMISSION RATE NOT APPARENTLY DIFFERENT FROM  
AV EMISSION RATE. EVENTS  $\leq 1/\text{yr}$

10.11 Stack Parameters -- Identify the stack parameters for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

☐

Point Source ID Code	Stack Height(m)	Stack Inner Diameter (at outlet) (m)	Exhaust Temperature (°C)	Emission Exit Velocity (m/sec)	Building Height(m) <sup>1</sup>	Building Width(m) <sup>2</sup>	Vent Type <sup>3</sup>
7I	10.6	3.7	26	42.1	N/A	N/A	✓
7P	10.6	3.7	26	42.1	N/A	N/A	✓
7UU	11.3	3.7	26	2	N/A	N/A	✓
7WW	11.3	3.7	26	6.1	N/A	N/A	✓
7ZZ	11.3	3.7	26	6.0	N/A	N/A	✓
7BBB	11.3	3.7	26	8.7	N/A	N/A	✓
7NNN	11.3	3.7	26	18.6	N/A	N/A	✓
7QQQ	11.3	3.7	26	7.8	N/A	N/A	✓
7UUU	11.3	3.7	26	6.9	N/A	N/A	✓
7EEE	11.3	3.7	26	15.9	N/A	N/A	✓

<sup>1</sup>Height of attached or adjacent building

<sup>2</sup>Width of attached or adjacent building

<sup>3</sup>Use the following codes to designate vent type:

H = Horizontal  
V = Vertical

☐ Mark (X) this box if you attach a continuation sheet.

10.12 If the listed substance is emitted in particulate form, indicate the particle size distribution for each Point Source ID Code identified in question 10.09. Photocopy this question and complete it separately for each emission point source.

CBI

☐

Point source ID code .....

Size Range (microns)

Mass Fraction (%  $\pm$  % precision)

< 1

$\geq 1$  to < 10

$\geq 10$  to < 30

$\geq 30$  to < 50

$\geq 50$  to < 100

$\geq 100$  to < 500

$\geq 500$

Total = 100%

☐ Mark (X) this box if you attach a continuation sheet.

PART C FUGITIVE EMISSIONS

10.13 Equipment Leaks -- Complete the following table by providing the number of equipment types listed which are exposed to the listed substance and which are in service according to the specified weight percent of the listed substance passing through the component. Do this for each process type identified in your process block or residual treatment block flow diagram(s). Do not include equipment types that are not exposed to the listed substance. If this is a batch or intermittently operated process, give an overall percentage of time per year that the process type is exposed to the listed substance. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01A Foam Bulk Chemicals AND 7.01B DOD/CASE Foam System  
 Percentage of time per year that the listed substance is exposed to this process type ..... 100 %

Equipment Type	Number of Components in Service by Weight Percent of Listed Substance in Process Stream					Greater than 99%
	Less than 5%	5-10%	11-25%	26-75%	76-99%	
Pump seals <sup>1</sup>						
Packed	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>-</u>	<u>N/A</u>	<u>N/A</u>
Mechanical	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>-</u>	<u>N/A</u>	<u>N/A</u>
Double mechanical <sup>2</sup>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>20</u>	<u>N/A</u>	<u>N/A</u>
Compressor seals <sup>1</sup>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Flanges	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>UNKNOWN</u>	<u>N/A</u>	<u>N/A</u>
Valves						
Gas <sup>3</sup>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Liquid	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>50(ESI)</u>	<u>N/A</u>	<u>N/A</u>
Pressure relief devices <sup>4</sup> (Gas or vapor only)	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>4</u>	<u>N/A</u>	<u>N/A</u>
Sample connections						
Gas	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Liquid	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Open-ended lines <sup>5</sup> (e.g., purge, vent)						
Gas	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Liquid	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

<sup>1</sup>List the number of pump and compressor seals, rather than the number of pumps or compressors

10.13 continued on next page

☐ Mark (X) this box if you attach a continuation sheet.

10.13 (continued)

<sup>2</sup>If double mechanical seals are operated with the barrier (B) fluid at a pressure greater than the pump stuffing box pressure and/or equipped with a sensor (S) that will detect failure of the seal system, the barrier fluid system, or both, indicate with a "B" and/or an "S", respectively

<sup>3</sup>Conditions existing in the valve during normal operation

<sup>4</sup>Report all pressure relief devices in service, including those equipped with control devices

<sup>5</sup>Lines closed during normal operation that would be used during maintenance operations

10.14 Pressure Relief Devices with Controls -- Complete the following table for those pressure relief devices identified in 10.13 to indicate which pressure relief devices in service are controlled. If a pressure relief device is not controlled, enter "None" under column c.

CBI

[ ]

a. Number of Pressure Relief Devices	b. Percent Chemical in Vessel <sup>1</sup>	c. Control Device	d. Estimated Control Efficiency <sup>2</sup>
4	100	NONE	100

<sup>1</sup>Refer to the table in question 10.13 and record the percent range given under the heading entitled "Number of Components in Service by Weight Percent of Listed Substance" (e.g., <5%, 5-10%, 11-25%, etc.)

<sup>2</sup>The EPA assigns a control efficiency of 100 percent for equipment leaks controlled with rupture discs under normal operating conditions. The EPA assigns a control efficiency of 98 percent for emissions routed to a flare under normal operating conditions

[ ] Mark (X) this box if you attach a continuation sheet.

10.15 Equipment Leak Detection -- If a formal leak detection and repair program is in place, complete the following table regarding those leak detection and repair procedures. Photocopy this question and complete it separately for each process type.

CBI

☐ Process type ..... 7.01A Foam Bulk Chemical System  
7.01B CASE/SOPE Foam System

Equipment Type	Leak Detection Concentration (ppm or mg/m <sup>3</sup> ) Measured at Inches from Source	Detection Device <sup>1</sup>	Frequency of Leak Detection (per year)	Repairs Initiated (days after detection)	Repairs Completed (days after initiated)
Pump seals					
Packed	N/A	N/A	N/A	N/A	N/A
Mechanical	N/A	N/A	N/A	N/A	N/A
Double mechanical	VARIED	FPM	CONTINUOUS	<1	<1
Compressor seals	N/A	N/A	N/A	N/A	N/A
Flanges	VARIED	FPM	N/A	N/A	N/A
Valves					
Gas	N/A	N/A	N/A	N/A	N/A
Liquid	VARIED	FPM	CONTINUOUS	N/A	N/A
Pressure relief devices (gas or vapor only)	4	FPM	CONTINUOUS	<1	<1
Sample connections					
Gas	N/A	N/A	N/A	N/A	N/A
Liquid	N/A	N/A	N/A	N/A	N/A
Open-ended lines					
Gas	N/A	N/A	N/A	N/A	N/A
Liquid	N/A	N/A	N/A	N/A	N/A

<sup>1</sup>Use the following codes to designate detection device:

POVA = Portable organic vapor analyzer

FPM = Fixed point monitoring

0 = Other (specify) \_\_\_\_\_

☐ Mark (X) this box if you attach a continuation sheet.



PART E NON-ROUTINE RELEASES

10.23 Indicate the date and time when the release occurred and when the release ceased or was stopped. If there were more than six releases, attach a continuation sheet and list all releases.

<u>Release</u>	<u>Date Started</u>	<u>Time (am/pm)</u>	<u>Date Stopped</u>	<u>Time (am/pm)</u>
<u>1</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>2</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>3</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>4</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>5</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>6</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>

10.24 Specify the weather conditions at the time of each release.

<u>Release</u>	<u>Wind Speed (km/hr)</u>	<u>Wind Direction</u>	<u>Humidity (%)</u>	<u>Temperature (°C)</u>	<u>Precipitation (Y/N)</u>
<u>1</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>2</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>3</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>4</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>5</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>6</u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>

☐ Mark (X) this box if you attach a continuation sheet.



# APPENDIX I: List of Continuation Sheets

Attach continuation sheets for sections of this form and optional information after this page. In column 1, clearly identify the continuation sheet by listing the question number to which it relates. In column 2, enter the inclusive page numbers of the continuation sheet for each question number.

Question Number (1)	Continuation Sheet Page Numbers (2)
7.01	42A
7.01	42B
7.03	44A
7.04	45A
7.04	45B
7.04	45C
7.04	45D
7.04	45E
7.04	45F
7.04	45G
7.04	45H
7.05	46A
7.05	46B
7.06	47A
7.06	47B
7.06	47C
7.06	47D
8.05	54A
9.03	90A

☒ Mark (X) this box if you attach a continuation sheet.

## APPENDIX I: List of Continuation Sheets

Attach continuation sheets for sections of this form and optional information after this page. In column 1, clearly identify the continuation sheet by listing the question number to which it relates. In column 2, enter the inclusive page numbers of the continuation sheet for each question number.

[illegible]

☐ Mark (X) this box if you attach a continuation sheet.



*Gene Seywell*  
DOW CHEMICAL U.S.A.

January 25, 1989

MIDLAND, MICHIGAN 48674

GENERAL ELECTRIC CO  
HOME REF DEPT

5528286

8TH ST S E  
DECATUR

AL 35601

Sir/Madam:

Enclosed are Material Safety Data Sheet(s) which provide information on products which you have purchased from us in the recent past. Since you may redirect the products to more than one place within your location, please make sure this information is available to all persons handling and/or using the product.

These Material Safety Data Sheet(s) have either been revised since you last received them or are for products which you recently purchased. Please consider them as the current copy to replace any previous version you may have received.

The distribution of these sheets is part of a continuing program of providing information and updating our customers. The regulations promulgated by OSHA for Hazard Communication, 29 CFR 1910.1200 have been considered in preparing these Material Safety Data Sheet(s).

Thank you for your help.

J.E. Betso  
Health and Environmental Sciences  
1803 Building

klr

Enclosure(s)

89 JUL 10 PM 2:44  
010244100001  
OFFICE

**Quality**

# M A T E R I A L   S A F E T Y   D A T A   S H E E T

---

Dow Chemical U.S.A.\*    Midland, MI 48674    Emergency Phone: 517-636-4400

Product Code: 92066

Page: 1

PRODUCT NAME: VORANATE (R) 3071 ISOCYANATE

Effective Date: 12/27/88    Date Printed: 01/25/89

MSDS:001138

## 1. INGREDIENTS: (% w/w, unless otherwise noted)

Toluene Diisocyanate (TDI)	CAS# 026471-62-5	60%
Prepolymer of TDI and propoxylated glycerine	CAS# 039279-01-1	10-30%
Prepolymer of TDI and propoxylated sucrose	CAS# 059154-64-2	10-30%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

## 2. PHYSICAL DATA:

BOILING POINT: 480F, 249C  
VAP PRESS: .04 mmHg @ 75F, 24C  
VAP DENSITY: 6.00  
SOL. IN WATER: Reacts  
SP. GRAVITY: Approx. 1.27 @ 25/4C  
APPEARANCE: Clear brown liquid  
ODOR: Very sharp, pungent odor.

## 3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 260F, 127C  
METHOD USED: PMCC, ASTM D93

FLAMMABLE LIMITS  
LFL: Not determined  
UFL: Not determined

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, or foam.  
If water is used, it should be in very large quantity. The reaction between water and hot isocyanate may be vigorous.

(Continued on Page 2)

(R) Indicates a Trademark of The Dow Chemical Company

\* An Operating Unit of The Dow Chemical Company

# M A T E R I A L   S A F E T Y   D A T A   S H E E T

Dow Chemical U.S.A.\*    Midland, MI 48674    Emergency Phone: 517-636-4400

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PRODUCT NAME: VORANATE (R) 3071 ISOCYANATE

Effective Date: 12/27/88    Date Printed: 01/25/89

MSDS:001138

## 3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

FIRE & EXPLOSION HAZARDS: Down-wind personnel must be evacuated. Do not reseal contaminated containers since pressure build-up may cause rupture.

FIRE-FIGHTING EQUIPMENT: People who are fighting isocyanate fires must be protected against nitrogen oxide fumes and isocyanate vapors by wearing positive pressure self-contained breathing apparatus and full protective clothing.

## 4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Stable when stored under recommended storage conditions. Store in a dry place at temperatures between 15-38C (60-100F).

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Water, acid, base, alcohols, metal compounds, surface active materials. Avoid water as it reacts to form heat, CO<sub>2</sub> and insoluble urea. The combined effect of the CO<sub>2</sub> and heat can produce enough pressure to rupture a closed container.

HAZARDOUS DECOMPOSITION PRODUCTS: Isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides and traces of hydrogen cyanide.

HAZARDOUS POLYMERIZATION: May occur with incompatible reactants, especially strong bases, water or temperatures over 49C (120F).

## 5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

### ACTION TO TAKE FOR SPILLS/LEAKS:

Evacuate and ventilate spill area, dike spill to prevent entry into water system, wear full protective equipment including respiratory equipment during clean up.

(Continued on Page 3)

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Product Code: 92066

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PRODUCT NAME: VORANATE (R) 3071 ISOCYANATE

Effective Date: 12/27/88    Date Printed: 01/25/89

MSDS:001138

## 5. ENVIRONMENTAL AND DISPOSAL INFORMATION: (CONTINUED)

Major spill: Call Dow Chemical U.S.A. (409) 238-2112. If transportation spill involved call CHEMTREC (800) 424-9300. If temporary control of isocyanate vapor is required a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed but not sealed containers for disposal.

Minor spill: Absorb the isocyanate with sawdust or other absorbent and shovel into open top containers. Do not make pressure tight. Transport to a well-ventilated area (outside) and treat with neutralizing solution consisting of a mixture of water and 3-8% concentrated ammonium hydroxide or 5-10% sodium carbonate. Add about 10 parts of neutralizer per part of isocyanate with mixing. Allow to stand for 48 hours letting evolved carbon dioxide to escape.

Clean-up: Decontaminate floor using water/ammonia solution with 1-2% added detergent letting stand over affected area for at least 10 minutes. Cover mops and brooms used for this with plastic and dispose properly (often by incineration).

DISPOSAL METHOD: Follow all federal, state and local regulations. Liquids are usually incinerated in a proper facility. Solids are usually also incinerated or landfilled. Empty drums should be filled with water. Let drum stand unsealed for 48 hours. Before disposal drums should be drained, triple rinsed, and holed to prevent reuse. Dispose of drain and rinse fluid according to federal, state and local laws and regulations. The most commonly accepted method is in an approved wastewater treatment facility. Drums should be disposed of in accordance with federal, state and local laws and regulations. Commonly accepted methods for disposal of plastic drums are disposal in an approved landfill after shredding or incineration in an approved industrial incinerator or other appropriate incinerator facility. Steel drums are commonly disposed in an approved landfill after crushing or in accordance with other approved procedures.

(Continued on Page 4)

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# M A T E R I A L   S A F E T Y   D A T A   S H E E T

Dow Chemical U.S.A.\*    Midland, MI 48674    Emergency Phone: 517-636-4400

Product Code: 92066

Page: 4

PRODUCT NAME: VORANATE (R) 3071 ISOCYANATE

Effective Date: 12/27/88    Date Printed: 01/25/89

MSDS:001138

## 6. HEALTH HAZARD DATA:

EYE: May cause pain and severe irritation with corneal injury.  
In animals, irritation and corneal injury healed within 21 days.

SKIN CONTACT: Prolonged or repeated exposure may cause skin irritation. Skin contact may result in allergic reaction even though it is not expected to result in absorption of amounts sufficient to cause other adverse effects.

SKIN ABSORPTION: The dermal LD50 has not been determined.

INGESTION: Single dose oral toxicity is low. The oral LD50 for rats is >4000 mg/kg. Ingestion may cause gastrointestinal irritation or ulceration.

INHALATION: Excessive vapor concentrations are attainable and could be hazardous on single exposure. Single and repeated excessive exposure may cause severe irritation to upper respiratory tract and lungs (choking sensation, chest tightness), respiratory sensitization, decreased ventilatory capacity, liver effects, cholinesterase depression, gastrointestinal distress and/or neurologic disorders. The 4-hour LC50 for TDI for rats is 13.9 ppm.

SYSTEMIC & OTHER EFFECTS: This mixture contains a component which is listed as a potential carcinogen for hazard communication purposes under OSHA standard 29 CFR 1910.1200 (TDI, listed by NTP and IARC). An oral study in which high doses of TDI were reported to cause cancer in animals has been found to contain numerous deficiencies which compromise the validity of the study. TDI did not cause cancer in laboratory animals exposed by inhalation, the most likely route of exposure. Birth defects are unlikely from exposure to the TDI component. Exposures having no effect on the mother should have no effect on the fetus. TDI did not cause birth defects in animals; slight effects were seen in the fetus but only at doses which caused toxic effects to the mother. Results of in vitro ("test tube") mutagenicity tests have been inconclusive.

(Continued on Page 5)

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# MATERIAL SAFETY DATA SHEET

Dow Chemical U.S.A.\* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 92066

Page: 5

PRODUCT NAME: VORANATE (R) 3071 ISOCYANATE

Effective Date: 12/27/88 Date Printed: 01/25/89

MSDS:001138

## 7. FIRST AID:

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician if irritation persists. Wash clothing before reuse. Destroy contaminated shoes.

INGESTION: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

INHALATION: Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen.

Call a physician.

NOTE TO PHYSICIAN: May cause tissue destruction leading to stricture. If lavage is performed, suggest endotracheal and/or esophagoscopy control. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient. The manifestations of reactions of the patient. The manifestations of the respiratory symptoms, including pulmonary edema, resulting from acute exposure may be delayed. May cause respiratory sensitization. Cholinesterase inhibition has been noted in human exposure but is not of benefit in determining exposure and is not correlated with signs of exposure.

## 8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): OSHA PEL is 0.02 ppm as a ceiling limit for toluene 2,4-diisocyanate. ACGIH TLV is 0.005 ppm; 0.02 ppm STEL for toluene 2,4-diisocyanate. Dow Industrial Hygiene Guide is 0.02 ppm as a ceiling limit for toluene diisocyanate.

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

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# M A T E R I A L   S A F E T Y   D A T A   S H E E T

Dow Chemical U.S.A.\*    Midland, MI 48674    Emergency Phone: 517-636-4400

Product Code: 92066

Page: 6

PRODUCT NAME: VORANATE (R) 3071 ISOCYANATE

Effective Date: 12/27/88    Date Printed: 01/25/89

MSDS:001138

## 8. HANDLING PRECAUTIONS: (CONTINUED)

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved supplied-air respirator. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse. Safety shower should be located in immediate work area.

EYE PROTECTION: Use chemical goggles. If vapor exposure causes eye irritation, use a full-face, supplied-air respirator. Eye wash fountain should be located in immediate work area.

## 9. ADDITIONAL INFORMATION:

### REGULATORY REQUIREMENTS:

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard
- A reactive hazard

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Prevent all contact; warning properties of this material (irritation of eyes, nose, and throat) are not adequate to prevent chronic

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# MATERIAL SAFETY DATA SHEET

Dow Chemical U.S.A.\* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 92066 Page: 7

PRODUCT NAME: VORANATE (R) 3071 ISOCYANATE

Effective Date: 12/27/88 Date Printed: 01/25/89 MSDS:001138

## 9. ADDITIONAL INFORMATION: (CONTINUED)

overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposure to lower concentrations. Exposures to vapors of heated TDI can be extremely dangerous.

MSDS STATUS: Revised Sections 1, 3, 5, 6, and 7.

### SARA 313 INFORMATION:

This product contains the following substances subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
TOLUENE-2,6-DIISOCYANATE	000091-08-7	<60 %
TOLUENE-2,4-DIISOCYANATE	000584-84-9	<60 %

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For Further Information.

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